

AMERICAN RAILROAD JOURNAL

AND

IRON MANUFACTURER'S AND MINING GAZETTE.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED AT 98 NASSAU STREET, NEW YORK.

Saturday, January 20, 1849.

RAILROAD IRON.

1,000 tons T Rails, weighing about 60 lbs. to the yard, of the latest and most approved pattern, for sale by **BOORMAN, JOHNSTON, & CO.**, 119 Greenwich st., New York.

Jan. 20, 1849.

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CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by **POWERS & WEIGHTMAN**, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

Index for 1848.

We send with this number, the **TITLEPAGE AND INDEX** for Vol. 21—or 1848.

Contrary to our expectations, the Journal is still behind its regular time, but we hope to be up to time in another week.

Errata.

In the article, on the comparative "receipts of the South Carolina railroad," published in our last number, on 2d page, 2d column, below the figures, the following sentence will be found, viz:—

"This is encouraging, and the prospect ahead, on the completion of the Western and Atlantic lake, to Chattanooga, and from thence up the Nashville and Chattanooga lakes, to Nashville, is bright indeed."

It is not easy to imagine how a passage, so much at variance with the copy, could have got in type. It should have read as follows:—

"This is encouraging, and the prospect ahead, on

the completion of the Western and Atlantic railroad to Chattanooga, and thence by the Nashville and Chattanooga railroad to Nashville, is bright indeed."

It may also be worth while to add one word to the first line of the 2d paragraph of the 3d column on same page—and then the line will read thus:

"It is well known, however, to those" &c., instead of "It is well, however to those" as it now reads.

Panama Railroad.

A work well begun, we have often heard it said, is half done, we may therefore conclude that the Panama railroad is about half done, as an efficient corps of engineers has left this city, for Chagres for the purpose of making the necessary surveys for locating the road.

Col. G. W. HUNTER, of the United States Topographical Engineers, has charge of the work, and is to be assisted by **Wm. Norris**, Esq., of Philadelphia, **Wm. H. Sidell**, Esq., late of the New York and Erie railroad, together with

Capt. Lloyd Tilghman,
Edward W. Serrell,
J. L. Baldwin,
John May,
J. J. Williams,
A. H. Mandeville,
George Stoddard,
George Wolcott, and
H. T. Stow.

The following gentlemen, are also attached to the party viz:—**Geo. W. Brown**, **W. Geo. Norris**, **W. J. Gaul**, **Henry M. Minor**, **Clarkson P. Hale**, **Benjamin Burns**, **Jas. O'Brien**, **Geo. E. Burr**, **John Wright**, **Wm. S. Ogden**, **Charles H. Ehrman**, **John H. Ballman**, **Robt. B. Jarvis**, **Wm. J. Corcoran**, **H. H. O'Callaghan**, **K. Dunglison**, **Washington Hopper**, and several others.

Most of the party left on the 22d inst., in the schooner **Templeton**, for Chagres, and others are to leave on the 1st and 5th of February.

The examinations are, we understand, to be commenced at the same time, both on the Gulf and on the Pacific side. **Mr. Sidell** to have charge of the parties on the Pacific, and **Mr. Norris** of those on the Atlantic side; and there can be little doubt but that the entire line will be thoroughly examined, and mainly located, by the end of May next, when the work will, we understand, be put under contract,

and, as a matter of course, completed at the earliest possible period.

We shall give in our next, a map of the Isthmus between Chagres and Panama, with the proposed and probable route of the road.

Deterioration of Permanent Way.

The Civil Engineer and Architect's Journal, says that "it is stated a committee has been appointed by the directors of the London and Northwestern railway company, consisting of **Mr. Dockray**, the resident engineer, **Mr. McConnell**, the locomotive superintendent, **Mr. Madigan**, the ballast carrying contractor for the southern division of the line, and **Mr. Crampton**, C. E., for the purpose of discussing by what means the comparative deterioration of the permanent way, caused by heavy engines of different classes, may be ascertained."

The **Balt. American** said, some time since, that "On Wednesday an excursion to various points on the line of the Hudson River railroad was made by the Directors and a number of stockholders. The route of the road is along and near the east bank of the Hudson; and the party went up in a steamboat, landing at various points in their course. Between New York and Poughkeepsie there are now five thousand men at work. The road is, we believe, the broadest in the country. A single track only will be laid at the commencement. The cost, of the road to Poughkeepsie, graded for double, but laid with a single track, and all necessary turnouts or switches, the erection of depots and the supply of the necessary carriages and locomotives, will be four millions of dollars. The loss of distance by this road upon a direct line is only six and three-quarters per cent.—less than upon any railroad in the country."

We republish this paragraph mainly to correct an error of the writer in relation to the width. He says "the road is we believe the broadest in the country;" not so, the N. Y. and Erie is the widest, being six feet—while this is of the ordinary width, or 4 feet 8 1/2 inches; and the Portland and Montreal is the next widest, being 5 feet 6 inches.

Philanthropic Society's Farm School for Vagrant Boys.—The selected design for the farm school for vagrant boys, at Potter's bar, near Barnes, to be founded by **H. R. H. Prince Albert**, consists of eight houses, each for about sixty boys, arranged on the sides of a chapel, as at the schools of reformatory discipline at Metray, Hamburg, and elsewhere on the Continent. Each building is to be adapted to the instruction of a separate family of the boys, in domestic occupations and mechanical arts, as well as husbandry and gardening.—**Artisan.**

A new Method of Extracting Pure Gold from Alloys and from Ores.—Mr. C. T. Jackson communicates the following process to *Silliman's Journal*:—"A method of obtaining pure metallic gold in the form of a spongy mass, has been practised by me for several years, and no account of the process has, to my knowledge, been published. It is very useful to the chemist and to the manufacturer, and is more economical than any other method that I am acquainted with."

After separating the gold from silver, by means of a mixture of nitric and hydrochloric acids, as is usually done, the solution containing gold and copper is to be evaporated to small bulk, and the excess of nitric acid is thus driven off. A little oxalic acid is added, and then a solution of carbonate of potash sufficient to take up nearly all the gold in the state of auriferous potash is gradually added. A large quantity of crystallised oxalic acid is now added, so as to be in great excess, and the whole is to be quickly boiled. All the gold is immediately precipitated in the form of a beautiful yellow sponge, which is absolutely pure metallic gold. All the copper is taken up by the excess of oxalic acid, and may be washed out. Boil the sponge in pure water so long as any trace of acidity remains, and the gold is then to be removed from the capsule, and dried on filtering paper. It may be formed into rolls, bars, or thin sheets, by pressing it moderately in paper. I have made several useful applications of the gold sponge thus prepared, and had a tooth plugged with it in October, 1846, to which purpose it is well adapted. By moderate pressure the spongy gold becomes a solid mass, and burnishes quite brilliantly.

The jeweller or goldsmith will find spongy gold to be quite convenient when he requires it for a solder, and it is a convenient form of the metal for making an amalgam for fine gilding. I have used it for some years in soldering platinum, and prefer it to the filings or gold foil for that purpose. This method of separating fine gold from coarse is very simple, and cheaper than the usual processes. It is applicable in the separation of gold from ores that may be treated by acids, and is vastly preferable to the method commonly used by chemists and assayers. When making oxide of gold for dentists' use, the chemist will find that oxalic acid, added to this potassic solution, will at once recover all the gold that is dissolved in an excess of the alkaline solution, much gold being lost by the usual method of preparing the oxide. Many other applications of this very simple method will occur to chemists and artisans."—*Artisan*.

Electric Telegraph from Vienna to London.—In a lecture, delivered on Thursday evening, at the Western Literary and Scientific Institution, by Mr. Partington, he stated, as a fact, that it was the intention of the Emperor of Austria, before the late troubles broke out, to have established a telegraphic communication between Vienna and London, by means of a single wire.

The Rocket Locomotive.

We give place to the following paragraph, as it gives us the latest account of a machine which astonished the world when it was exhibited on the Liverpool and Manchester railroad, but not allowed to compete for the prize of 500*l*. in October 1829, because it weighed, with wood and water on board, over five tons! many changes have occurred since that date—especially in railroads and locomotive engines.

"The *Carlisle Journal* gives the following particulars of Mr. Stephenson's first celebrated engine, the 'Rocket,' which was bought in the year 1837 from the Liverpool and Manchester, by Mr. J. Thompson, of Kirkhouse, the lessee of the Earl of Carlisle's coal and lime works. Here the engine was worked for five or six years on the Midgeholme line, a local line belonging to Mr. Thompson, for forwarding his coals from the pits towards Carlisle. Soon after the engine was placed on the line the great contest for East Cumberland took place, when Sir J. Graham was superseded by Major Aglionby; and it was used for conveying the Alston express with the state of the poll from Midgeholme. Upon that occasion the 'Rocket' was driven by Mr. Mark Thompson, and accomplished its share of the work, a distance of upwards of 4 miles, in 4½ minutes;

thus reaching a speed nearly equal to 60 miles an hour. On the introduction of heavier and more powerful engines, the 'Rocket' was 'laid up in ordinary' in the yard at Kirkhouse, where it now stands, no less a monument of the genius of the inventor than as a mark of the esteem in which his memory is held by Mr. Thompson. Such an engine, says the same *Journal* the first constructed on the principle which has brought railways to such a height of perfection in this country and throughout the world—ought to have its abiding place in the British Museum."

Railway Signal.

The railway Chronicle, gives the following account of a new signal.

"The Southeastern have been experimenting a new signal, to effect an instantaneous communication between the guards and the engine drivers, or from any station or post of watch to a train. The machinery is said to be so simple that it is in the power of the slightest touch to render it effective. By the forcible expulsion of air striking upon the extreme edge of a bell-shaped contrivance, sound is conveyed four miles round. It has been found that in dense foggy weather its shrill cry penetrates the atmosphere with a facility unknown to the whistle raised by steam; and as it does depend upon the latter agency, its small and compact machinery may be fixed inside any one of the carriages far removed from the engine, and there worked by hand if desired, or acted upon by gear attached to the axle. The patentee is a Mr. Wells; and Mr. Farnlough, the chief locomotive engineer, and the rest of the officers of the Southeastern line, have afforded facilities for its trial and adoption.

Messrs. Smith, of the Strand, have concluded a contract with the MIDLAND and CHESTER and HOLYHEAD, for the privilege of selling newspapers, books, &c., at the various stations. As we have previously announced they already hold a similar contract with the London and Northwestern, they have now secured the right to supply periodical literature to passengers over 1,000 miles of rail. In case of irregularities of any description, or of deficiencies in the present arrangements of this important service, the public will know to whom in future to apply for remedy.

"Mr. Hudson is reported to be ready to lease the STOCKTON and DARLINGTON, which has always paid 40 per cent, since its opening in 1835, and is almost exclusively devoted to the conveyance of coals from the coal-fields of Durham and Stockton, at from 10 to 15 per cent."

TRAFFIC ON THE ENGLISH RAILWAYS.

The following extracts from the railway statistics of England, by Hyde Clarke, Esq, may be both useful and interesting to our readers, and therefore we give them from the Civil Engineer and Architect's Journal.

The total tonnage of goods in the years ending 30th June, 1844, 1845, 1846 and 1847, is as follows, including every description of traffic: was in

1844	9,823,533
1845	12,522,976
1846	15,871,179
1847	16,699,382

The following shows the distribution in traffic in 1847, in tons:

Coals and coke	8,900,000
Ironstone	600,000
Iron	300,000
Iron dross	110,000
Copper and tin	23,000
Limestone and lime	300,000
Building stones	600,000
Sand	37,000
Ballast	36,000
Bricks and tiles	5,000
Miscellaneous minerals	300,000
Fish	43,000
Grain	300,000
Provisions	400,000
Manure	40,000
Goods, timber and sundries	4,706,382

Total

To show how small this traffic is relatively to the total carried, the following items in the consumption of the people of this island, in tons, may be noted:

Corn	3,000,000
Potatoes	3,000,000
Sugar	300,000
Tea, coffee and tobacco	50,000
Malt	400,000
Spirits	100,000
Paper	40,000
Soap	90,000
Candles	100,000
Cotton goods	250,000
Woolens	100,000
Linens	100,000
Iron	1,600,000
Glass	40,000
Coals	30,000,000
Salt	650,000
Timber	2,000,000

Total

This enumeration of 41,720,000 tons is under the mark, and only gives the total consumption of this island, reckoning the articles as only carried one way, and not including many articles of agricultural produce—manures, leather, 60,000; fish, stone, lead, copper, earthenware, oil, 60,000; fruit, etc.;—bark, 50,000; dyestuffs, 70,000; hemp, 50,000; cabinet woods, 30,000; rice, 20,000; tar, 20,000; turpentine, 20,000, etc. The railways at present do not carry more than a fourth of the traffic of the country, if so much.

The largest tonnages in 1847, were the following

York and Newcastle	2,706,595
Ballochney	1,746,339
Midland	1,449,215
London and North Western	1,411,080
Stockton and Darlington	1,127,058
Wishaw and Coltness	924,424
Lancashire and Yorkshire	763,016
Leeds and Thirsk	610,235
North Union	548,813

The total receipts for minerals and goods in 1847 were £2,600,000, of which for minerals, 750,000.

AVERAGE RATE AND MILEAGE.

It is of importance for engineers to know the average distance that each class of produce is carried, and the average receipt, which are far below what is believed.

Passengers.—The average mileage of all the passengers in 1847, was 16, and the average receipt 2s. The average receipt on the London and North-western is 4s; Great Western 4s 6d; Midland, 2s 7d; Southeastern, 1s 6d; Brighton, 2s 4d; eastern counties, 3s; Southwestern, 3s; and Lancashire and Yorkshire, 1s 4d.

Beasts.—The average receipt for beasts on the London and North-western is, 42d, mile; 57; Eastern Counties, 68, miles 75; Great Western, 34d, miles 45.

Sheep.—London and North-western, 10d, 70 mile; Eastern Counties 9d 75 miles; Great Western, 10s, 66 miles.

Swine.—London and North-western, 18d, 120 miles; Eastern Counties 6d, 58 miles; Great Western 12d, 75 miles.

Coals.—York and Newcastle, 16d; Stockton & Darlington, 18d; Midland, 27d; London and North-western, 20d.

Ironstone.—Ballochney, 9d; Taff Vale, 28d 25 miles.

Limestone and Lime.—Midland, 22d; Newcastle and Carlisle, 20d, 16 miles; York and North Midland, 14d, 9 miles.

Building Stone.—York and North Midland, 24d, 24 miles; Midland, 20d; Newcastle and Carlisle, 22d.

Sand.—Bodmin and Wadebridge, 21d, 8 miles.

Fish.—York and Newcastle, 21s 50 miles; Norfolk, 13s, 68 miles; Whitby & Pickering, 3s, 25 miles.

Parcels.—Average of enumerated lines, 3-9d.

Horses.—Average of all lines, 10s. Carriages, ditto, 25s.

Horse Traffic.—The total number of horses carried in 1847, was 99,405, and the total receipts 80,216*l*.

The greatest horse traffics are the following:—

	Horses.	£
London and Northwestern.....	27,715	22,890
Great Western.....	11,785	12,788
Midland.....	12,373	11,794
Eastern.....	8,155	6,084
Brig. & Exeter.....	6,558	4,901
York and North Midland.....	5,813	2,613
Southwestern.....	5,447	4,335
Southeastern.....	3,782	3,576
York and Newcastle.....	3,456	—
The charge for horses per mile is, London and Northwestern, 3d; Great Western, 5-4d; Midland, 4-25d; Eastern counties 8-6d.		

Railway Amalgamation on a large scale.

We have for some time past noticed in the English railway papers, indications of a movement among the powerful companies, between London, Winchester, Liverpool, Bristol, Exeter, and that portion of England northeasterly, or including easterly and southeasterly from London, tending towards an amalgamation—or a combination of interest and action.

We have always encouraged amalgamations when we thought the interest of the shareholders and the public would be promoted thereby—as for instance, from *Boston to Albany*—from the *Hudson river to Lake Erie*, from *Boston via Concord to Burlington, Vt.* and also from *Boston via Fitchburg and Rutland to Burlington*—and in most other similar lines, including branches dependent mainly on such lines; but we much doubt the policy of uniting three, or even two, such powerful companies as those named and described in the following article, which we take from the supplement to the London "circular to bankers" of Nov. 10th—for which we are indebted to a kind friend resident in London.

The aggregate amount of capital of the three companies will be over *forty-two millions sterling*, or more than \$200,000,000!! and those who may be entrusted with its management may possibly, in the consciousness of their own power, forget the rights of others, and become too strong for the government itself; therefore for these and other good reasons, we should oppose such an amalgamation in this country.

"*The Amalgamations.*—The official announcement promulgated yesterday, of an intention on the part of the London and Northwestern, Great Western, and Southwestern railways, to apply to Parliament in the ensuing session for powers to amalgamate, has been the subject of more than ordinary conversation and comment. Divested of its various technicalities, the notice is a comprehensive proposal for consolidating the three railways, hitherto in a state of perpetual hostility, into one great working corporation, under some name yet to be decided on, provided that all these are to become one; but in the event of any one being dissentient, the other two may coalesce, it being agreed that the third, which shall not have so amalgamated, "subsequently" may come in. The bill proposed to be applied for also contemplates an alteration in the tolls and fares. Both the London and Northwestern and Great Western have issued notices convening special meetings of their respective proprietors for the 13th of December, to consider and decide upon the subject.

"*The Great Railway Companies.*—The proposed amalgamation of the London and Northwestern, Great Western, and Southwestern railways, will, if effected, create the most powerful combination ever known in this country, and bring to one undertaking an amount of capital larger than any of our great national undertakings. The total amount of the capital of the amalgamated company will be £42,371,239, divided as under:—London and Northwestern capital, raised by shares £14,044,573; by loans, £9,185,672; total, £23,231,245. The shares in this company are 10,181 original shares of £100 each, which are paid up; 55,000 London and Birmingham £25 shares, upon which £22 have been paid, 163,380 new quarter (£25) shares, upon which £7 only have been paid, 66,879 fifths or £20 shares, upon which £18 have still to be paid, 13,000 London

and Manchester £40 shares, £25 paid, and £15 due; 30,000 Manchester and Birmingham £10 shares, marked A, upon which £9 are paid; 60,000 ditto, marked B, £9 paid; 70,000 marked C, £1 paid; consequently the company have power to call upon—55,000 Quarter shares, at £4 each.....£ 220,000
163,380 New ditto, at £18 each.....£ 2,940,840
66,879 £20 shares, at £18 each.....£ 1,203,822
120,000 £40 shares, at £ 15 each.....£ 1,800,000
30,000 £10 shares, at £1 each.....£ 30,000
60,000 £10 shares, at £9 each.....£ 540,000

The capital of the Great Western is £11,457,277; £6,478,221 being raised by shares, and £4,979,056 by loan. The share capital is divided as under: 25,000 shares of £100 each, £90 paid up; 28,000 £50 shares, all paid; 93,000 £25 shares, upon which £4 are still due; 37,500 £20 shares, paid up; and 69,700 new £17 shares, on which £13 have been paid. This company has still power to call upon—35,000 original shares, at £10 each.....£ 350,000
93,000 £25 shares at £4 each.....£ 372,000
69,700 £17 shares, at 2 each.....£ 1,193,400

The Southwestern company has raised from shares 6,075,387, and by loans 1,609,350, or a total of 7,684,737. The Southwestern shares may be classed as under:—25,840 50/- paid up shares; 60,000 new 50/- shares, upon which 42; 10 have been paid; 46,500 40/- shares, upon which 34 have been paid 9,266 50/- consolidated tenths, paid up; 12,000 40/- consolidated tenths paid up; 920,560 16/- 13-4 thirds, upon which 13-6-8 have been paid; 147,766 new 7 per cent, scrip upon which 13 4 only have been called up. This company has therefore, power to call upon—

6,000 50/- shares, at 7 10 each.....	45,000/ 0 0
46,000 40/- shares, at 9/- each.....	279,000 0 0
120,560 16/- 13 4 shares,	
3 6 8 each.....	281,306 13 4
147,766 16/- 12 6 shares, at	
14/- 19 10 each.....	2,210,482 13 4

2,815,789 6 4

The amalgamated companies will, by their present powers, be entitled to call up, within the time allowed by the act for doing so, the sum of 8,819,201 6 8. The entire weekly receipt of the three companies, should they not exceed their present average, will be 70,000/- per week, or 3,640,000 per annum. The number of miles of railway over which the companies will have control will be nearly 2,000, upwards 1,000 of which they will have in their absolute possession. The Northwestern consists of London and Birmingham, 112 1/2 miles, Birmingham to Newton 83 miles. Macclesfield branch 10 miles, Northampton and Peterborough 47 1/2 miles, Bedford and Bletchley 16 1/2 miles, Leamington and Coventry 9 miles, Aylesbury seven miles, Bolton and Leigh ten miles, Chester and Crewe 21 miles, Trent Valley 49 1/2 miles, Dunstable seven miles, a portion of the North Union and Preston 16 miles. The Great Western from Paddington to Bristol 118 1/2 miles, Didcot to Oxford ten miles, Swindon to Gloucester 37 miles, Kemble to Cirencester four miles, Bristol to Exeter 75 1/2 miles, Gloucester to Cheltenham 7 1/2 miles, Reading to Hungerford 25 1/2 miles, Wilts, Somerset, and Weymouth 13 miles opened, Reading and Basingstoke 20 miles. The Southwestern main line is 106 miles; Bishopstoke to Salisbury 22 miles, Southampton to Dorchester 61 miles, Weybridge to Chersey three miles, Poole branch two miles, Windsor and Datchet 14 miles, Waterloo extension two miles. The great companies will thus by means of their own and other lines, in which they are beneficially interested, have the entire traffic from Plymouth to Perth.

The proposed amalgamation of the London and Northwestern, the Great Western, and the Southwestern railway companies has since its public announcement engaged the attention of several shareholders in those companies, and has given rise to much conversation on the subject. A great practical difficulty presents itself to them respecting terms upon which it is proposed to amalgamate. Shareholders of the London and Northwestern contend that it would be exceedingly unjust to them to unite at par with either the Great Western or the Southwestern, the stock of the former being considered more valuable in every respect than that of either

of the latter. The Great Western shareholders, on the other hand, believe it would be advantageous to them to amalgamate, and, as a proof, the prices of their shares have risen considerably since the announcement. Some of the Liverpool shareholders of the London and Northwestern look with considerable dismay upon the scheme; they say the object for which it is proposed to amalgamate—namely, to avoid expensive Parliamentary contests—would be much better effected by a committee composed of equal numbers of directors or shareholders in the three companies, with power to decide any question or dispute which may arise between the respective boards as to branches or extensions. They are alarmed at the probable consequences of further amalgamation, which they say can only have the effect of permanently reducing the dividend, stating as a case in point that the Liverpool and Manchester from its opening in the year 1830 to the amalgamation with the Grand Junction and the Birmingham in 1846, paid a dividend of 10 per cent, per annum, that the Grand Junction paid at one period 13 per cent, and never less than 9 1/2 per cent, per annum, until after the amalgamation in 1846 with the London and Birmingham company. The last dividend of the amalgamating or London and Northwestern company was at the rate of 7 per cent per annum. Those who were in the habit of receiving 10 per cent dividend for the past 16 years, feel the reduction, as well as those who purchased the shares in the London and Northwestern at a high premium, expecting that it would continue to pay a 10 per cent dividend, and of course anxious to avoid further reduction. The amalgamation scheme is looked upon with much distrust, its magnitude being likely to create public jealousy, and thereby render it liable to restrictions which might tend to still further injure the property and reduce its value. The general opinion is, that the scheme will result in no good to the shareholders generally, and that it has been concocted more with a view to promote the great ambition of a few individuals, than to effect any substantial benefit to the shareholders or advantage to the public.

Dublin and Kingstown Railway.

We have published many of the reports of this company, and often quoted its management for the benefit of others; therefore we give its last report, especially as the last half year's dividend was only 4 per cent. It has usually, for several years, been 5 per cent., or 10 per cent., per annum. We give the report entire, with the remarks of some of the managers. It shows well—

Dublin and Kingstown Railway Company. General Meeting.

The half-yearly meeting of the shareholders in this company was held at the Offices, Dublin; George Roe, Esq., in the chair.

Mr James Pim (the treasurer of the company) read the following abstract of receipts and expenditure for the six months ended 31st August, 1848, together with the subjoined half yearly report:—

"Gentlemen,—We now submit a short abstract of receipts and expenditure for the six months ended 31st of August last, and although it shows a trifling decrease of income, yet it may be considered rather as a cause of congratulation that there is not a much greater falling off, when you recollect the extremely unfavourable weather which prevailed during the summer months.

"During the half-year we have made a considerable reduction in the fares on the Dalkey line. We have also tried the experiment of occasionally reducing all the fares one half, and we have revised and remodelled the fares between the intermediate stations; and so far as we can judge, we have reason to be satisfied with the result.

"We have the satisfaction to state that the

line of railway and the working stock is in excellent order.

"The rates and taxes on the line have been still further increased, and are now quadruple what they were two years since. The important subject continues to occupy the anxious attention of the Board, and we are now seeking to obtain a more equitable valuation.

"In our report of October, 1847, we apprised you of a new and amicable arrangement into which we had entered with the Waterford, Wexford, Wicklow, and Dublin railway company, modifying in some important respects the original agreement; and in last April you were informed that the company had brought a bill into parliament to legalize this arrangement. We have now to announce that this act has been obtained, and that it authorises the South Wales railway company to subscribe 250,000*l.* to that undertaking.

"The abstract of accounts shows a profit from the six months of 11,156*l.* 7*s.*; from which, in pursuance of the 9th section of the Extension Act, the board have apportioned the sum of 9,800*l.* for dividend for the past half-year, being at the rate of 4*l.* per cent. on your paid-up capital of 245,000*l.* This will leave a balance of 1,656*l.* 7*s.* to the credit of the next half-year, when the detailed and comparative statement for the whole year will be laid before you.

"GEORGE ROE, Chairman."

Abstract of Receipts and Expenditure for the Six Months ended August 31.

DEBTOR.

Expenditure on management, maintenance, and working of the Dublin and Kingstown and Kingstown and Dalkey railways, in the six months ended 31st of August, 1848.....	£14,761	9	1
Taxes and rates	2,199	4	3
Interest on debenture loan	1,400	0	0
Net balance	11,456	7	0
	£29,320	1	4

CREDITOR.

Income of the Dublin and Kingstown and Kingstown and Dalkey railways, for six months ended 31st of August, 1848.....	£29,507	19	4
Balance to credit of interest account.....	173	16	5
Balance from last half-year's accounts.....	138	5	7
	£29,820	1	4

The chairman then briefly addressed the meeting. He said—Gentlemen, I have scarcely a word to add to the report which you have just heard read. We have endeavored to make it as short and as clear as possible; and I have only to congratulate you upon the result of the last half-year's operations. (Hear, hear.) We have laid the accounts before you in the most simple and intelligent shape, and have endeavored to remove all complication from them, so that any person can understand them without the slightest difficulty. (Hear, hear.) It is now my duty to move that the report and abstract of accounts which have just been read be received, adopted, inserted on the minutes, printed, and circulated among the proprietors. (Hear, hear.) The dividend which we have announced will be payable on and after Monday, the 23d inst., at this office,

Mr James Perry—I have great pleasure in rising to second the motion. There is one trifling question, upon which, perhaps, it would be satisfactory to the meeting and the public that some explanation should be given. We are all aware that there has been a reduction of one-half in the fares on the Dalkey line, in addition to further reduction on particular days. Now, it would be gratifying to know how the concern has worked since the reduction was made. (Hear, hear.) That there has been some falling off, I anticipate; but it would be an interesting fact to know what is the exact result. (Hear, hear.)

The Chairman—We have stated generally that the result of our experiments has been satisfactory; but it has been particularly so with regard to the Dalkey line. (Hear, hear.) There has been no falling off whatever in the receipts; on the contrary, there has been an increase. (Hear, hear.)

Mr. J. Pim—Yes; although there has been a trifling reduction of about 250*l.* in the receipts of the company for the half-year, there has been an increase of 30*l.* in the Dalkey line, for the same period, at reduced fares. (Hear, hear.)

The report and statement of accounts were then received and adopted.

Alderman Boyce said, it was very complimentary to the directors of that company to be enabled, in the present depressed state of affairs, to declare so good a dividend as 4 per cent. for the half-year; if the same care which was paid to that company were observed with regard to others, he had no hesitation in saying that different results would be the consequence. (Hear, hear.)

Mr. Pim observed that the circumstances under which they met on the present occasion were very gratifying; but particularly so when they recollected that that company had no engagement for guarantees of any kind whatever, nor did they hold any shares in the stock of other companies. Their loan from the board of works was being gradually liquidated; and, so long as they paid 4 per cent. interest on their debenture loan of 70,000*l.*, the principal could not be demanded; and they had no other pecuniary engagement of any kind. On the whole, he considered the concern to be in as sound and healthy a state as possible. (Hear, hear.)

Mr. Gresham said, that in the course of his life he had never seen a railway so well and efficiently conducted as the Dublin and Kingstown. (Hear, hear.)

The meeting then separated.

Railway Accounts by Captain Haish.

We continue this valuable document. The captain says—

But it may be urged, if an allowance for "depreciation" is not absolutely necessary for the due maintenance of the working stock, why adopt it for the rails? There cannot be a stronger illustration of the correctness of the above remarks than is thus afforded. The wear and tear of the rails was long considered so very slight, that the question of renewing was altogether overlooked. Experience has proved, that with the speeds and the weights

now employed, the "life" of a rail is not above twenty, or at the most thirty, years.—The difference then is this—rails cannot be repaired; they are all used together and equally; the decay of each is therefore proceeding in the same ratio, making a trifling allowance for the different texture of the bars; and they, consequently, will all wear out about the same time. To prevent, therefore, the whole renewal falling in one year, the annual estimate of "depreciation" (a term very properly applied in this case) is put aside till a fund has accumulated, which shall do at once that which, with the plant, has been daily and hourly going on for years.

There can be no doubt that the system of writing off a certain amount periodically from the working capital has found favor with many who regarded the continual outlay on new and additional engines, carriages, and waggons, as an indication that the repairs were not keeping pace with the wear and tear. In this I think they were mistaken, and that so far from the new stock being required to fill up deficiencies arising from work, it has (at least, in our case) not proceeded in the ratio of additional mileage and increased receipts. It will at once be admitted that, for both these, capital should, in the first instance, be debited. Some light will be thrown upon the point in a subsequent part of the report.

Again, apprehension was caused in consequence of observing a deterioration in the performance of the public service. There was, doubtless, some time ago, a falling off in this respect; but this proceeded from no depreciation of the stock—it arose from the altered circumstances and demand of the times, from a large increase in business suddenly produced by a reduction of fares, and from applying that stock to duties for which it had never been originally calculated and provided. The market value remained unchanged, but the effective value, though improved, was unequal to the additional and unexpected duty imposed on it.

But the ability of a company to maintain, at its full "market," and therefore above its first "effective," value, the whole of its plant, must, of course, depend on the means at its command for repairing and renewing it; and in this respect the London and North-Western company stands very favorably.—The establishments at Crewe, Wolverton, Longsight, Liverpool, and London, are amply sufficient to overtake the repairs and renewals of a stock of engines which has only cost 700,000*l.*; and the capacity and accommodation afforded are much larger, in proportion to the stock to be kept in order, than is possessed by any other company in the kingdom. It is from no lack of means, therefore, to prevent it, if depreciation is permitted to arise.

The outlay of the three principal factories belonging to the company, together with the cottages, I find to be as follows:—

Crewe,	£242,759
Wolverton,	170,988
Longsight,	35,281

The rental from cottages is 6,605 $\frac{1}{2}$ per annum, representing, at 4 per cent., the sum of 165,125 $\frac{1}{2}$, and leaving 283,903 $\frac{1}{2}$ as the cost of the buildings, and fixed machinery employed in the repairs and renewal of stock. The interest on this, at the current rate of the day, is an item fairly chargeable to the stock. It has, however, always been debited to construction; and its transference to its proper account would only prove how much more has, in reality, been done for the maintenance in full efficiency of the working plant, than has generally been imagined.

Again, the possessions of the extensive factory of Crewe (where, in addition to the daily repairs of extensive stock, there is the capacity of turning out a new engine every week) has enabled the company to supply itself with all the engines, carriages, and wagons required for the northern division, including the working of 50 miles of the Trent Valley, 90 miles Preston to Carlisle, and 60 miles Chester to Bangor (in all 200 additional miles), at cost price; and the manufacturer's interest on his capital, and profit on the large increase of stock of every description (of which, excepting a small order of wagons, none has been purchased), has been saved to the company; it will be found that this amount, taking at 20 per cent. (the manufacturer's usual calculation), amounts to a very large sum, which should, in fairness, be charged to the stock, and credited to the factory. I mention it now, because, in any "market" valuation, it tends greatly to enhance the present relative condition of the plant.

I have alluded to the diversity of practice adopted by railway companies in regard to "depreciation." The great majority have never recognised the necessity of any specific provision for this purpose, and among these the South-Western company, through its chairman, have strenuously denied the propriety of any allowance. Mr. Chaplin, acting on analogy drawn from the old coaching system, contended that to repair an engine when damaged, and replace it when worn out, constituted all the claims which the stock had upon the company. The present state of the South-Western stock, it is believed, is evidence of the practicability of carrying out this theory. Again, the Liverpool and Manchester never established a depreciation fund, nor deducted any amount from the capital account to represent an assumed "wear and tear." The London and Birmingham company, at a very early stage of its career, commenced the practice of writing off 10 per cent. from the cost of its stock annually, and continued it systematically for a long period. A few other companies timidly and partially followed the practice; but the Great Western and the Manchester and Leeds alone continued it for any time, and they, at length, abandoned it. The Grand Junction adopted a mixed plan (based on an annual valuation of its stock) of continually infusing a certain portion of new and additional plant, and making up any deficiency by a "depreciation fund." It requires no argument to show that,

supposing no new branches or increased traffic to have demanded additional stock, the system of writing off ten per cent. annually, over and above the expense of repairs, must, in time, have reduced the cost of the stock in the books to a very small figure indeed.—Such a process argues nearly an annihilation of the whole plant in ten years; instead of which we see everywhere an improved stock with increased durability. Unless the preceding arguments and the subsequent calculations and estimates are fallacious, this has led to a positive extinction of capital for the benefit of futurity. If it is answered that each year would place the concern so regulated on a safer basis, I reply, that this argument, if sound, may be pushed to any extent, but at the expense of the dividends; and that not, as with a reserved fund, where every proprietor can judge for himself of the security which it presents for the maintenance of his interest, but silently and unknown to all, except to those who may narrowly investigate the subject. If proprietors would consent to waive their dividends altogether, not only the working stock but the entire capital of the railway might, on an 8 per cent. return, be redeemed in 12 $\frac{1}{2}$ years, and a private partnership might possibly choose so to pay off its first outlay; but this is contrary to the whole theory on which a corporate body is managed, and the extinction of capital representing working stock, forms no exception to the rule.

I now proceed to apply this reasoning to the facts as they present themselves:—

First, comparing our past and present condition; and, secondly, considering our relative position with other companies.

The last valuation was made in 1846, in accordance with the instructions already quoted. At that time, the total cost of the moving capital, reduced as it had been by the depreciation theory, stood at 1,130,899 $\frac{1}{2}$; and the result of the valuations gave a return of 1,117,272 $\frac{1}{2}$, or an apparent falling off of 13,627 $\frac{1}{2}$.

It appears, however, that a very large amount of stores, material, and stock (already paid for and charged), was altogether omitted in the valuation, which, if inserted, as it is now, in the following inventory, would have greatly increased the market value beyond the original cost. Again, the estimate was in many respects manifestly too low; for instance, 22 engines taken indiscriminately, which were of too small a class for our use, and the aggregate valuation of which was 12,711 $\frac{1}{2}$, have since been sold in worse times, and have realised 16,220 $\frac{1}{2}$, or nearly 25 per cent. above the valuation. Other marked discrepancies might be quoted. There is every reason, therefore, for being satisfied that we were at that time considerably in advance of the original cost.

Having ventured at the time to express very strong doubts of the propriety of deducting anything for depreciation last half year, more especially in the absence of any data for our guidance, I turned my attention again to the subject, and attempted to obtain a more complete list of our existing stock, and a valuation of every engine, carriage,

and wagon, and all materials, and machinery which had been charged against this account, or paid for out of revenue. This work has been accomplished with the valuable assistance of Mr. Watkin, and the estimate of the company's officers, who valued on the previous occasion, is attached to every item.

Railroad from Pittsburg to the Mississippi.

We published, in a previous number, a synopsis of the report of the *Pennsylvania railroad company*—and we now publish an extract from an article from the *Louisville Journal*, with comments upon it by the *Pittsburgh Gazette*, showing the deep interest taken by the several cities on the Ohio in its early construction. It is only by watching the increasing movements of the people, in all the different sections of the country, that we can estimate the future growth of the railway interest in this country. And there is one peculiar feature, connected with the subject, which insures their rapid, and continued extension; and that is, the people, in the large cities, and in the small cities, and in the towns and villages, and in the agricultural regions, cannot afford to do without them. Every part of the country must and will have their railroad facilities.

A GREAT CENTRAL RAILROAD.

"We referred, on Wednesday, to the anxiety with which Cincinnati viewed the railroad movements of Pittsburgh, and to the important idea, that the Pennsylvania and Ohio railroad about to be built, would form the main trunk of a great central railway, between the Lakes and the river, from Pittsburgh to St. Louis. Since then we received the *Louisville Journal*, of Nov. 25th, which contains the following article, which is worthy of the attention of our readers as showing how strong a competition exists for the trade of the great West, and that longer delays would be highly detrimental to the interests of this city and of the state:

"*Railroad to Connect Louisville, and St. Louis*—Ten or twelve years ago a charter was granted in Illinois to construct a railway from Alton to Mt. Carmel, on the Wabash, and one in Indiana for a railroad from Mt. Carmel to New Albany, Indiana, two miles below Louisville. These charters have recently been renewed, and the directors of the two roads are now making vigorous efforts to procure means for their construction, and with the best prospects of success. General Pickering, the president of the first named road, has recently passed along the line, and procured handsome subscriptions from some of the corporations, and he is now applying for aid to New Albany and Louisville. He is on his way to the east to lay his schemes before the capitalists of that region, and will early in the session apply to Congress for a grant of alternate sections, six miles on each side of the road, from New Albany to Alton, with the right to locate other sections in lieu of such as are taken up by individuals. A bill making this grant passed the Senate at

the last session, and was defeated in the House by four votes in consequence of some misunderstanding between the friends of a similar grant asked for in the south and the delegation from Illinois. There is little or no doubt that the application will be successful at the present session. It is so obviously to the advantage of the government to make this disposition of its lands on all important routes, and the policy is sustained by such distinguished names among the opponents of internal improvement by the General Government, that we look to this appropriation with great confidence. If it be made, there will be no difficulty in completing the road.

We look upon this road as one of the most important ones in the Union. If made, it will be a part of the main trunk of railroad communication between the east and the west. This trunk will pass through Lexington to the mouth of Big Sandy, thence to connect with the Baltimore road or the Richmond road. A glance at the map will show that it is much the shortest route from St. Louis to Baltimore, while it runs in a latitude in which the snows are not troublesome nor the winters long. And the route possesses the advantage of being nearly level the whole way from St. Louis to the mouth of Big Sandy. From Alton to Mt. Carmel, it is estimated that a road with a large T rail, and fully furnished, will not cost over \$9,000 a mile. From Mt. Carmel to Louisville it is stated on good authority that an excellent route can be obtained. From this city to Frankfort the cost will but little exceed \$10,000 a mile. From Lexington to the mouth of Big Sandy, a route nearly level along a ridge can be obtained for the whole distance. The whole route from St. Louis to the mouth of Big Sandy would probably not average over 12,000 a mile completely furnished with locomotives, cars, depots, &c.

"The route spoken of through Indianapolis and middle Ohio to Pittsburg would be a longer and much more expensive route, and would lie in a higher latitude. It would not touch the Ohio, nor any important railroad trunk. The St. Louis and Louisville road, on the other hand, would intersect the Ohio at the Falls, affording the railroad passengers an opportunity of taking the river, and river passengers the opportunity of taking the road; and it would also connect with the great southern trunk of railroads destined to pass from Louisville, and branching in North Alabama, to Georgia and South Carolina, Mobile, and New Orleans. There is no earthly comparison between the proposed route from St. Louis to Pittsburg and the route via Louisville.

"The Mt. Carmel road terminates at Alton, where there is high land, instead of passing eight miles over the American bottom to a point opposite St. Louis. Illinois is not disposed to contribute to the building up of a city in another state without a chance of contributing to the growth of one on her own shores; and, as the shore opposite St. Louis is too low and unhealthy for a city, she has chartered the road to terminate at the first

high land above St. Louis, which happens to be Alton. This is but twenty-four miles above St. Louis, and at Alton ferry boats will connect with the railroad to convey freight and passengers to St. Louis. If the road terminated opposite St. Louis, ferry boats would be equally necessary. The cost of the road to Alton will be much less than to a point opposite St. Louis. The eight miles of the American bottom are subject to overflow, and would cost a large sum originally and require heavy outlays for repairs.

"At the last session of the Illinois legislature, a most powerful and ferocious effort was made to obtain a charter for a road to terminate opposite St. Louis, and connect with roads through Indiana and Ohio, but the effort failed. It will probably be again renewed this winter, but we have good reason for believing that it will not meet with as much favor as before. If so, the project will probably be altogether abandoned.

"It is estimated that the entire cost of the railroad from Louisville to Alton will be but \$2,750,000 and that a profit can be realized of 20 per cent, as soon as the road is completed. It will intersect the eastern edge of the coal field sixty miles from Louisville. This edge abounds in iron ore. There will be a wonderful tide of travel between the two extremities, besides an unusual quantity of way-business along the whole line. The city of Louisville should do everything in its power to promote the success of this enterprise.

"On the above interesting article, we have space for comments but on two points.

"First. The assertion that the route through Indianapolis and middle Ohio to Pittsburg, would be longer and more expensive than the Louisville route, is not founded on any correct data. The length of the route, from Alton to Baltimore, by way of Louisville, considering the character of the country through which it would have to pass, which would cause great variations from a direct line, would be much greater than a middle route from St. Louis to Pittsburg, and the central road to Philadelphia. As to expense, the comparison is greatly in favor of the Pittsburg route. By the Louisville route, all the large streams flowing into the Ohio, below that city, have to be crossed by expensive bridges, and it is well known that the nearer you approach the Ohio river, the more difficult and broken does the country become. On the Pittsburg route, the level table lands are followed for the whole distance, until near the Mississippi; crossing no large streams, and incurring little expense for bridging. This is a most remarkable topographical feature. The "high latitude" would be a low one compared with the most successful railroads in the country, and will secure to it an immense trade in wheat, not equalled by any route in the world. Its "not touching the Ohio," is greatly in its favor, as it will not then come into direct competition with steamboat trade. As to its not touching "any important railroad trunk," nothing could be further from the facts in the case. It will intersect and

cross more important artificial means of inter communication, than probably any other railroad in the country. To name a few, all in the state of Ohio. It would cross the Wellsville and Cleveland, railroad—the Ohio canal—the Cleveland, Columbus and Cincinnati railroad, and the Cincinnati and Sandusky railroad, all connecting the lakes with the Ohio river, and all acting as so many artificial channels to convey passengers and produce to the main great trunk. Then it will intersect the most important public works in Indiana, and by means of lateral branches, the railroad of Michigan and northern Illinois. No railroad could be projected on the whole continent, possessing so many and so important advantages of connection as this. In comparison with them, those of the Louisville route, sink into insignificance. And what has the Louisville route to offer, in reference to connections?

"It would intersect the Ohio at the Falls!" What a vast advantage for travellers, and freight, going west, to find that when all the difficulties of navigation had been overcome, a railroad awaiting them. So of travellers and freight, coming east, the railroad would leave them at the most important point; for the idea of a railroad running through the hills of Kentucky, parallel with the Ohio river for three or four hundred miles, and then overcoming the rugged mountains of Virginia, passing for a great part of the way through a sparsely populated country, is too preposterous for consideration. But would not the Pittsburg route intersect the Ohio river, by means of the various roads it would cross, some of which are now in operation? Surely. All the advantages such intersection could give to the Louisville project would be possessed by our central road.

"But then there are two other very important advantages possessed by the Pittsburg route, over the Louisville or Cincinnati. The first is, it commands the trade of the vast Lake country, not second to any other in the Union. The other is, its connection east from Pittsburg, is sure, and in rapid process of completion. The construction of a road from Louisville east, is perfectly hopeless, at least for a generation or two to come; and that from Cincinnati to Baltimore is far from being in a flattering condition. On the Pittsburg route, all the arrangements are made for the states of Pennsylvania and Ohio, and the road passing through a highly cultivated country, will pay a good dividend from its local trade alone, and will consequently be rapidly pushed on the Mississippi.

"Second. The second point for comment, is the fact stated by the Louisville paper, that a bill to grant alternate sections of land, six miles on each side of the Louisville and Alton route, passed the Senate of the United States, at the last session of Congress, and was defeated in the house by only four votes, and that the application is to be again made at the approaching session. Now, what we wish to call attention to is, that the friends of the Pittsburg route ought to endeavor to incorporate in the bill, a similar grant to their

contemplated middle route. It will pass through a country containing, in Indiana and Illinois, as much government land, and more, than the Louisville route, and is just as important in a national point of view. Let the members of Congress whose constituents are interested, remember this.

"To the citizens of the central parts of Ohio, Indiana, and Illinois, and St. Louis, this great central road is of the last importance, and we call their especial attention to it. The road is now surveyed from Philadelphia to Mansfield, in Ohio. It is finished to Harrisburgh, from Harrisburgh to Lewistown, it will be finished by May next; in December, 1849, it will be finished to Huntingdon; in May following, it will be finished, in connection with the Portage railroad to Johnstown; from Johnstown to Pitsburg, the route is surveyed, and will be put under contract in two or three months. From Pitsburg to Beaver, we have steamboat navigation, but the route is surveyed, and will be put under contract as soon as the western sections are fairly started; from Beaver west to Salem, forty miles will be put under contract as soon as the necessary preparations can be made; from Salem west to Mansfield, the route will be prepared as speedily as the nature of the case will admit; and from that west to the Ohio state line, correspondence for its location is now in progress.

"From this statement, the people of Indiana and Illinois will see, that all they have to do, to secure the benefits of this great artificial thoroughfare, will be to procure from their several legislatures liberal charters, authorizing them to connect with the Pennsylvania and Ohio road, without specifying any particular points. Having secured this, and an appropriation of land from Congress, with a commendable public spirit on the route, the whole road can be put under contract within two years. Is this an unreasonable supposition? Greater things have been done by the energy of man.

"St. Louis is deeply interested in this enterprise, and we expect she will render all the aid which can be given by her enterprising population.

Closing of Capital Accounts of Completed Railways—How is it to be Done?

As this is a matter in which the shareholders in railroads in this country are deeply interested as well as in Europe, we give the views of an English writer in the R. W. Chronicle, of October 21st, on the subject.—It is an important question, and should be maturely considered:—

"A principal reason of the distrust which prevails as to the accounts of railway companies, lies in the fact that the capital expenditure debited to the old trunk lines and their first branches, long ago opened for traffic, does not cease, but is continually creeping on. This is the gravamen of Mr Arthur Smith's charge, mixed up with much trade, and put forward with much ignorance. For instance, the Great Western Company's capital account, excluding altogether the recently finished or non-completed lines, stands thus:

	Opened through-out.	Expenditure at the half yearly balance next after opening.	Expenditure, Dec 31. 1847.
London to Bristol	June '41	£ 5,877,000	£ 7,480,000
Oxford Branch	June '41	68,000	175,000
		5,945,000	7,655,000

These lines when opened were 128 miles long, and were on the 31st of December 1847 still only 128 miles long, as before, and yet the expenditure upon them had crept up by £1,710,000, or 29 per cent.

In the companies now amalgamated as the London and North-Western company, it will be found that the capital expenditure, has increased since the opening by about 4,000,000, excluding altogether fictitious capital created on new lines undertaken, excluding even the tunnel to the docks at Liverpool. A similar increase, we believe, will be found on any of the old lines.

The London and South-Western company appears best in this view of the case; for their expenditure on the line to Southampton and Gosport has only increased £200,000 since the opening, or by about 8 per cent. of the expenditure.

Now, what is the meaning of this extraordinary swelling of the cost of a concern long after it is apparently completed? Why should the capital of a trunk railway, say 128 miles long, have increased by 30 or 40 per cent. at the end of six years after it was opened, although a separate account has been opened for every additional mile of railway subsequently constructed, and the trunk line is now only 128 miles long, as it was before? Why was it not paid for, once for ever, within the first year after its opening? and if so, how is it possible that its cost should have gone on increasing at this pace? These are the questions continually occurring to shareholders, and which lie at the root of much of the present doubt as to railway property.

What, then, is the explanation of this expenditure? The enemies of railways, Arthur Smith, and others, will say, these items are old debts, which were improperly kept back to save appearance, but which, like murders, are out at last. The item of "locomotive stock," one large item of increase, is really the replacement of old stock, which should have been paid out of current revenue. The "stations" are the whole cost of the new and magnificent stations lately built, "capital" having already paid for the old ones, pulled down, and therefore having been charged improperly with two sets of stations, when there is only one to show for the money.—These and similar charges will be the mode of explanation which the enemies of boards will adduce. The directors and their friends will, on the other hand say, look at the arbitrary reduction of fares forced upon us, and the enormously increased quantity of business we have now to do to earn the same money. This has involved the necessity of a far greater quantity of locomotive stock, and of more extensive accommodation at stations and elsewhere. Look again at the

increased mileage of the railways we are working in connection with the trunk line. To do this we have necessarily increased the accommodation of the trunk line; and this accounts for the swelling of the expenditure on the trunk line. It is an expenditure really chargeable on the new branches, forced upon us by the public.

The latter view is no doubt in the main the true one: still there is probably some truth in the charges of the grumblers; and it appears to us that there never can be any end to the doubts on these points. Until stock is periodically taken on every completed railway, on the principle we explained as to depreciation of engines (see p 749)—that is to say, until the locomotive stock, the rails and sleepers, and the stations or other works which are about to be altered or enlarged, are periodically valued—any addition to the value, under any of these heads of expenditure, being charged to capital, and any deficiency in the value debited against revenue,—we shall then, and only then, be sure that for every addition to capital expenditure additional value can be shown.

We have so fully explained our meaning as to engines, that it is scarcely necessary to repeat the application of our rule as to permanent way, materials and stations. Permanent way, indeed, speaks for itself; but to avoid misapprehension as to stations and works, let us take a case:—Say the stations have cost £20,000 at the time of our periodical valuation in January 1848, and are about to be enlarged and improved. In January 1849, when the periodical valuation recurs, we find £50,000 has been spent on the station during the year, and the old station has disappeared—the materials having been sold for £5,000. In this case, the station at D, being in January 1849 worth to value only £50,000, should only stand at so much in the capital account; and the difference between £20,000 and £5,000, the cost of the old station which has been pulled down, and the price at which the old material sold, should be charged upon revenue—such old station having been expended or used up since the line opened. In the ordinary way of keeping the capital account, probably this £50,000, the cost of the new station, less £5,000 for the old material, would be simply added to the £30,000 before spent, and the station at D would then stand in capital expenditure at £65,000, while there would only be a station worth £50,000 to show for the money.

The principle for which we contend is, in short, the common mercantile principle of taking stock periodically, adopted in every private business; and until this is done on railways, we can have no security that the capitals in revenue accounts are respectively debited with their due burthens; and that we are not either on the one hand, as Mr Smith says we are doing, paying dividends out of capital by subtracting unduly yearly profits; as Capt. Huish says the London and North-Western railway company were on the eve of doing.

This is the only way to close the capital accounts; the mere prohibition to charge any

more to the capital of the old lines would be absurd and impracticable, if their receipts and business increased and are to increase, as it should be their constant effort to make them: and as in the nature of things they must, their capital expenditure must also increase—and this increase will be an honest increase or not, as they are able to show increased value of stock in trade or not.

Chloroform as a Motive Power.

The following account gives us a new idea. We find the article in the London Mining Journal.

"M. Lafond, an officer in the French naval service, has taken out a patent for an engine, in which chloroform, in conjunction with steam, is the motive power. A trial was made recently at the manufactory of M. Charles Beslay, at Paris, in the presence of several engineers, manufacturers, and deputies. The results obtained from this experiment were highly important, and indicative of considerable economy. The engine has two cylinders, one to be acted on by steam generated in the usual manner. The boiler is vertical, and contains several copper tubes, among which the flame passes into the chimney; and, from the amount of heated surface, the water is quickly raised to boiling temperature. To the other cylinder and piston is attached the chloroform apparatus, consisting of a cylinder of cast iron placed vertically, containing, like the boiler, a number of copper tubes, the lower ends of which are closed, and the others all terminate in a single pipe in communication with the second cylinder. In these tubes chloroform is placed, and the first cylinder which receives the steam is in direct communication with the chloroform apparatus; the steam having raised the piston in the steam cylinder, and at the same time opened the valve communication with the chloroform tubes passes into the cylinder around them, and having the property rapidly to absorb calorific from the steam, the latter is suddenly condensed, the chloroform transformed to vapor, which, expanding along the pipe to the second cylinder, raises its piston—the steam piston is depressed, and the operation goes on alternately.—This liquid thus performs the operations of a condensing agent, and a prime mover. The chloroform is, of course, again condensed for repeated use. It will thus be readily understood, that an expenditure of fuel is required only for one motion of the steam piston, the down stroke being performed by the calorific still contained in the steam, sufficient to vaporize the other agent. It is stated that by ether and chloroform a saving of 50 per cent, is secured in proportion to the cost of the common steam engine, and that "aldehyde" is still more economical.

James River and Kanawha Company.

On the 30th of November this company held their annual meeting at Richmond.

On the nomination of Wm. M. Peyton, Esq., the following gentlemen were unanimously elected president and directors of the company for the present year:

President—W. B. Chittenden.

Directors—Thomas M. Bondurant, Samuel McCorkle, Thomas H. Ellis, W. W. Boyd, and John S. Gallaher.

It is gratifying to us to see an early friend at the head of this important company. A gentleman of more sterling integrity, of more elevated moral character and views, or of more intense desire to carry through, to a successful termination, the great work with which he has been so long identified, cannot be found within the "old dominion." Long may he live, with health improved, and energies unimpaired, to be useful to the people of Virginia.

But with all our friendship for the man, and our desire to see him prosper with the noble work to which he has long been devoted, we cannot see as he sees, or feel as he feels, in relation to the results to follow the course now pursued by those having charge of the company. As we feel quite convinced

that as the canal will not be carried over the mountain, it will not be a judicious expenditure to lay out \$600,000 on the navigation of the Kanawha river—as it must and will be ultimately superseded by a railroad—just as the Pennsylvania canals are to be superseded by a continuous railroad.

It is of little moment what may be individual preferences, and opinions, and prejudices, so long as the spirit of the age, and the habits of the people are for accelerated speed. Revolutions seldom go backward, and more especially in the facilities for travel, and the transacting of business; and as well might we attempt to return to the old fashion mode of carding wool by the hand, and spinning and weaving it in our families, as was done forty years ago in New England, as to attempt to transact the business of the country on canals yet to be constructed. Those now in use, and nearly completed, will be used; but there is scarcely an instance of a canal in the country, now in use, which will not have a railroad in its vicinity, to compete for its business within ten years, and the James River and Kanawha company will not be an exception should it be completed.—Why, then, not build a railroad at once from the termination of the canal, on the east side of the mountain to the Ohio, and make it a feeder to the canal, and thus avoid making an investment so "permanent" as would be that made in the Kanawha River.

We trust we shall be excused for speaking freely on this subject, as one motive only prompts it, viz., a desire to see an easy and rapid communication from the Ohio to Tide Water in Virginia.

The following account of the proceedings at the meeting will show the desires and intentions of the managers:—

"November 30th, 1848.

On motion of Wm. H. Macfarland, Gen. John H. Cocke was appointed chairman; G. O. Gerberding, the secretary of the company, attending as clerk.

Thereupon, Wm. M. Peyton, chairman of the committee of thirteen, presented the following

REPORT.

The committee, to whom was referred the president's report with the accompanying documents, and to report such measures to the meeting of the stockholders as they may deem expedient, beg leave to report that they have had the same under consideration, and recommend the adoption of the following resolutions:

1. Resolved, That a memorial be presented to the legislature, asking that the State may guarantee the bonds of the company, or otherwise lend its aid or credit, to enable the company to complete the proposed improvement of the Dock; and to make the proposed connection between the Canal and tide water; and that if such application be granted, the president and directors of the company are hereby authorized, for the purpose of securing the debt to be so incurred, to execute such mortgage or other lien upon the Dock, and other real estate of the company upon the line of the said connection, as may be necessary, or as the legislature may require.

2. Resolved, That an application be respectfully made to the next session of the legislature for aid to raise the sum of \$600,000, for the construction of a lock and dam navigation for steamboats from the mouth of the Great Kanawha to the Great Falls thereof.

3. Resolved, That the terms of the Act of Assembly, passed 10th February, 1818, providing for connections between the Canal and the south side of James River, appear to the stockholders to be inconsistent with the prior obligations of the company, inasmuch as they propose a mortgage of a portion of the company's revenue which is already under mortgage for other purposes; that the cost of the said connections would be greater than the sum of money provided by the said act; and that the company, therefore, respectfully decline to accept its terms.

4. Resolved, however, That the company deem proper connexions between the Canal and the south side of the James River, and also connexion with the Rivanna River, highly important to the interests of both the company and the State; and that the legislature be requested to grant the company such aid as will enable it to complete them.

5. Resolved, That the additional regulations for the Canal, Dock, and Western Improvements, adopted temporarily by the board of directors, and presented by the president along with his annual report, be and the same are hereby sanctioned and adopted, except the 1st and 3d, adopted on the 22nd November, 1847, and on the 2nd March, 1848.

The 1st Resolution was read and adopted.

The 2d Resolution was read. O. M. Crutenfeld, Esq., proposed the following substitute:

Resolved, That application be made to the Legislature for a loan of \$60,000 for the erection of a lock and dam, at Tyler's shoal on the Kanawha River, as recommended by the president in his annual report in 1846.

Which substitute was rejected by the following vote, ayes 2811, noes 3030, and the resolution as reported by the committee was adopted.

3d and 4th resolutions read, and the following substitute offered by Thomas M. Bondurant, Esq.:

Resolved, That the Legislature be requested to amend the act of the 10th February, 1848, providing for sundry connexions between the Canal and the south side of James River, so as to provide an amount of funds sufficient to construct said connections, without imposing on the company the duty to build the proposed bridge at Jefferson.

Which substitute was rejected—ayes 1670, noes 4021. Thomas M. Bondurant, Esq., moved to recommit the subject to the committee, to report to-morrow night.

Which motion was amended by Wm. Daniel, Jr. Esq., to submit the same to a committee of three, to report to-night, which was adopted.

The following substitute was reported by the committee, and adopted by the meeting:

Resolved, That an application be made to the Legislature to enable the company to make the long postponed connexions, with the south side, and to construct the Rivanna connection.

Wm. H. Macfarland, Esq., offered the following resolution, which was adopted:

Resolved, That the application of Messrs. Duval, James & Co., for a reduction of tolls on nails and bar iron, manufactured at the Manakin works, on the line of the canal, and the application of Robert Carter Page, for a reduction of tolls on granite, be referred to the president and directors for their consideration and decision.

We find the following paragraph in the Richmond Republican, of 4th ult., in relation to

The Rappahannock Canal.

We are pleased to learn, from the Fredericksburg News, that this improvement has been opened for navigation, and that boats are already arriving with wood, lumber, flour, &c. Only 20 miles remain unfinished, to Carter's Run in Fauquier, and that portion will be completed by the 1st June next. This opens up trade with the upper part of Fauquier and Rappahannock, and portions of Page and Shenandoah.

The South Branch of the Rappahannock, winding through the counties of Green, Madison, Orange and Culpeper, it is expected, will be improved to Liberty Mills, within a few miles of the Ridge, which will secure trade from the counties above named, and some portions of Rockingham, Shenandoah and Page.

The News anticipates great results from this improvement, and gives the proper meed of gratitude to A. J. Marshall, Esq., of Fauquier, who revived the scheme after it had been torpid for many years, and who, with that energy and unflinching resolution for which he is distinguished, spent two years in giving it new vitality. We know something of Mr. Marshall's intense application to this object, and can heartily endorse the compliment due to him.

The work, however, eventually devolved upon the present company, the Messrs. Gordon & Co., enterprising capitalists, to whom the public are also indebted in an eminent degree.

The News thinks the old town of Fredericksburg is yet destined to rise in importance and wealth.

Light Locomotive Engines with Carriages Combined for Railway Traffic.

We have frequently alluded to Mr. Samuel's plan, of light engines and carriages combined, for short or branch railroads; and we now give a brief description, with an illustration, from the London Illustrated News. This represents the engine with two wheels, and the carriage with four—but we find in the Civil Engineer and Architects' Journal for December, an illustration of another engine, upon the same plan, only the locomotive part has four wheels—the additional wheels being much larger than the others, and the axle placed behind the boiler.

The opinion is becoming somewhat prevalent that there is generally too much gross weight in our passenger trains—and an effort will be made to devise some plan by which a light business may be done with less wear and tear, and we shall endeavor to keep our readers apprised of what is done, that they may, at all times, avail themselves of what is useful.

We are indebted to the EUREKA, a valuable periodical, conducted by Messrs. Kingsley & Pirsson, patent agents, of this city, for the engraving; and the following is the description.

THE "FAIRFIELD" RAILWAY STEAM CARRIAGE.

About a year since, (October 30th, 1847,) we gave in our columns an engraving of a Lilliputian locomotive, constructed by Messrs. Adams and Co., of Fairfield Works, for Mr. Samuel, the engineer of the Eastern Counties railway. This carriage engine was constructed for the supervision of the line to save the expense of the large machines. Another engine, intended to work branch lines of the Bristol and Exeter broad gauge, was last week making some experimental trips on the West London, which is laid for both gauges, or what is called the 'mixed' gauge—and the results were highly satisfactory; putting beyond all doubt the soundness of the principle.

The order for this steam carriage was given to Messrs. Adams and Co., by Mr. Charles Hutton Gregory, the engineer of the Bristol and Exeter line, under the sanction of his directors, after a single trial of the Lilliputian locomotive of Mr. Samuel, which is christened the "Express." The conviction was conclusive in the mind of Mr. Gregory, that light steam carriages were not only practical, but economical, and that by their agency profits might be made on branch lines which previously had yielded only losses.

Still, though the "Express" was a little "fact," the passenger carriage had yet to become a greater fact, and doubts in abundance were circulated.—But united purpose grew from the conviction of mechanical truth; for it was not regarded as a problematic scheme, but as a well ascertained plan.

The design and plan of the "Fairfield" is by the patentee. It was approved by Charles Hutton Gregory, who gave the carriage its name. The engine is peculiar, as will be seen by the view we have given. The frame is, for convenience, made to bolt to the carriage firmly, in a separate length, so as to remove with facility, in case of repairs. The boiler is tubular and vertical, 3 feet in diameter, and 6 feet high—150 tubes, 4 feet in length, 1½ inches diameter. Fire box, 2 feet high, 2 feet 6 inches diameter. This will give 20 square feet of heating surface in the fire box, 150 feet tube surface in the water, and 50 feet in the steam, which has great effect in drying it before it leaves the boiler. The vertical tubes are found to generate steam very rapidly.

The cylinders are 8 inches in diameter, and of 12 inches stroke. The pistons communicate by their connecting rods with a separate crank shaft, on which are placed the eccentrics. The driving wheels, (4 feet 6 in. in diameter), the axle of which is in front of the boiler, are put in motion by side rods or crank pins. Thus when the side rods are removed, the whole becomes an ordinary wheel carriage. The tank is in front of the boiler, and will contain 220 gallons of water. The coke box is attached to the carriage end. The fuel and water would be sufficient for a journey of about forty miles. The first class compartment is fitted for 16 passengers, but 6 extras could find room. The second class will carry 32, but on occasions 49—total 60. The running wheels are 3 feet 6 inches in diameter, and run independently on their axles, as well as the usual movement of the axles in the journals. The frame is within nine inches of the rails, and no steps are required. The total weight is estimated at ten tons; and the consumption of coke will be under 10 pounds per mile.

The steam carriage was delivered on to the West London before she was in thorough working condition, in

order to test her powers. The result has been that she has exceeded a speed of 35 miles an hour up a three mile incline of 1 in 100; and 41 miles down the same incline, with the disadvantages of a very sharp curve and no run at starting, very loose rails, and one of them deeply rusted from disuse, and grinding in the flanges with great friction. There is little doubt that, when in order, she will make 60 miles per hour on good rails on a level. We understand that, when completed, it is the intention to run her for several days on the W. London, to give directors and engineers an opportunity of trying her.

We should mention, that in the trimmings of the carriages, is worked the monogram of the railway company—a tasteful novelty, introduced by Payne and Son, of Great Queen street, Lincoln's-inn-fields.

Improvement in the Steam Engine, Economy of Fuel.—We have just been shown a decided improvement in the practical working of the steam engine, which, as regards economy of fuel, and obtaining regularity of motion, we are satisfied must become an important acquisition in engineering. The discoverer of the improvement is Mr. W. Rowan, of the firm of John Rowan and Sons, of York st. foundry, in this town, who has taken out a registered patent for the invention, which is now at work on several steam engines in town, and on one lately erected by the above firm, of 41 horse power, for Messrs. Langtry & Co. Fortadown. The improvement is founded on a plain unerring principle in mechanical science, and is distinguished for the ease and facility by which it can be applied to steam power of every description. It simply consists of a slider, acting in immediate connection with the governor, on the expansion valve, in such a manner as to adapt the engine to the pressure, whatever that may be, by cutting off the steam at any given point of the stroke, while the engine is at work, and thereby securing at once regularity of motion, and an immense saving of fuel of fuel in proportion to the power employed. We are satisfied that the mercantile community, especially the extensive manufacturers of this town and neighborhood, will not be slow to take advantage of so valuable an acquisition in that all important agent in their affairs, the steam engine.—*Banner of Ulster.*

Ice.—The intrinsic value of ice, like that of metals, depends on the investigation of an assayer. That is to say a cubic foot of Lower Canada ice, is infinitely more cold than a cubic foot of Upper Canada ice, which contains more cold than a cubic foot of Wenham ice, which contains infinitely more cold than a cubic foot of English ice; and thus, although each of those four cubic feet of ice has precisely the same shape, they each, as summer approaches, diminish in value—that is to say, they each gradually lose a proportion of their cold, until long before the Lower Canada ice has melted, the English ice has been converted into lukewarm water.—*Chambers' Edinburgh Journal.*

An Experimental Vessel.—There is now loading in the North Docks, Sumnerland, an experimental vessel, named the *Mary Caroline*, built by Mr. Siddon, of Rochester, who is also the owner. She has no keel, but is flat bottomed, and built in the barge style. Neither is she caulked—the seams are lined with felt. She is 224 tons register, and carries 4000 yards canvass when in full sail; and when full laden with 20 keels of coals, she draws only 9½ feet of water. She is intended for the French trade. On the run down, with a N. N. W., wind, she outstrips 40 colliers.—*Durham Advertiser.*

Scientific Discovery.—The Rev. Dr. Callan, professor of natural philosophy in Maynooth college, has made a very important discovery in galvanism; he has found that common cast iron is greatly superior as a negative pole even to platinum; that a battery of such material, with the usual positive poles, is much more powerful than Grove's or Woolaston's batteries.

HUDSON RIVER RAILROAD.

NOTICE.—PROPOSALS FOR SPIKES.—Proposals will be received at the office of the Company, No. 54 Wall street, until the 15th day of February next, for a quantity of Wrought Iron Railroad Spikes, from fifty to two hundred tons, (of 2000 lbs.) to be delivered at such wharf or wharves on the line of said Railroad as may be designated by the Chief Engineer in the employment of said Company. The Spikes to be nine-sixteenths of an inch square, headed and sharpened, suitable for the purpose, and to be of such lengths, not less than six, nor more than seven inches, as may be required by said Engineer. The Spikes to be made of the best quality of iron, and put into suitable kegs, with weight and size of Spike marked on the head.

The Directors reserve to themselves the right to accept or reject proposals that may be offered, as they may consider the interest of the Company to require.

JOHN B. JERVIS, Chief Engineer.
Office Hudson River Railroad Co.,
New York, 10th Jan., 1849. } 3c2

FULLER'S PATENT INDIA RUBBER SPRINGS.—The Commissioner of Patents has dissolved the interference which had been declared against this Patent. The Patentee is ready to supply the springs upon the shortest notice, in any quantity, and at a moderate cost. They have now been in use for nearly 4 years, with complete success. They are made of the best materials, are economical, both as to cost and wear; are light and very easy in their motion.

The patent was granted to W. C. Fuller, in October 1845. G. M. KNEVITT, Agent.
Office, 78 Broad street New York, and at Messrs. James Lee & Co., 18 India Wharf, Boston.
Jan. 13, 1849.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee. G. A. NICOLLS,
Reading, Pa. ja45

IRON BRIDGES, BRIDGE & ROOF BOLTS, etc.—STARKS & PRUYN, of Albany, N. York, having at great expense established a Manufactory with every facility of Machinery, for manufacturing Iron Bridges, Bridge and Roof Bolts, together with all kinds of the larger sizes of Screw Bolts, Iron Railings, Steam Boilers, and every description of wrought iron work, are prepared to furnish to order, on the shortest notice, any of the above branches, of the very best of American Refined Iron, and at the lowest rates.

During the past year S. & P. have furnished several Iron Bridges for the Erie Canal, Albany Basin, etc., and a large amount of Railroad Bridge Bolts, all of which have given the most perfect satisfaction.

They are permitted to refer to the following gentlemen:

Charles Cook,	Canal Commissioners
Nelson J. Beach,	of the
Jacob Hinds,	State of New York.
Willard Smith Esq.,	Engineer of the Bridges for
	the Albany Basin.
Messrs. Stone & Harris	Railroad Bridge Builders,
Mr. Wm. Howe,	Springfield, Mass.
Mr. S. Whipple,	Engineer & Bridge Builder,
	Utica, N. Y.

January 1, 1849.

MATTEWAN MACHINE WORKS.

THE MATTEWAN COMPANY HAVE added to their Machine Works, an extensive LOCOMOTIVE ENGINE department, and are prepared to execute orders for Locomotive Engines of every size and pattern—also, Tenders, Wheels, Axles, and other Railroad Machinery, to which they ask the attention of those who wish such articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC.—Of any required size or pattern, arranged for driving Cotton, Woollen, or other Mills, can be had on favorable terms, and at short notice.

COTTON AND WOOLLEN MACHINERY, Of every description, embodying all the modern improvements, second in quality to none in this or any other country, made to order.

MILL GEARING, Of every description, may be had at short notice, as this company has probably the most extensive assortment of patterns in this line, in any section of the country, and are constantly adding to them.

TOOLS. Turning Lathes, Slabbing, Planing, Cutting, and Drilling Machines, of the most approved patterns, together with all other tools required in machine shops, may be had at the Mattewan Company's Shops, Fishkill Landing, or at
39 Pine Street, New York.
WM. B. LEONARD, Agent.

FAIRBANKS' RAILROAD SCALES.

THE SUBSCRIBERS are prepared to construct at short notice, Railroad and Depot Scales, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and despatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon Railroads, either in the United States or Great Britain; and the manufacturers refer with confidence to the following in the United States.

Eastern Railroad,	Boston and Maine R. R.,
Providence Railroad,	Providence & Wor. R.R.,
Western Railroad,	Concord R. R.,
Old Colony Railroad,	Fitchburg R. R.,
Schenectady Railroad,	Syracuse and Utica R. R.,
Baltimore & Ohio Road,	Baltimore & Susq. R. R.,
Phila. & Reading Road,	Schuylkill Valley R. R.,
Central (Ga.) Railroad,	Macon and Western R.R.,
	New York and Erie Railroad;
	and other principal Railroads in the Western, Middle and Southern States.

E. & F. FAIRBANKS & CO.
St. Johnsbury, Vt.
Agents { FAIRBANKS & Co., 81 Water st. N. York.
A. B. NORRIS, 196 Market st., Philad.
April 22, 1848. 1y*17

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merriut, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

RAILROAD IRON.

THE NEW JERSEY IRON CO'S WORKS, at Boonton, are now in full operation, and can execute orders for Railroad Bars of any required pattern, equal in quality to any made in this country. Apply to DUDLEY B. FULLER, Agt.
139 Greenwich Street.
New York, October 25, 1848.

DIRECT ACTION ENGINES FOR STEAMBOATS.

THE PATENT DOUBLE CYLINDERS, AND ALSO THE ANNULAR RING PISTON ENGINES, of Messrs. Maudslay, Sons & Field, of London, may be built in the United States, under license, which can be obtained of their agent,

THOMAS PROSSER, C. E.,
28 Platt street, New York.
May 6, 1848.

WILLIAM JESSOP & SONS, CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly receiving, from their manufactory,

PARK WORKS, SHEFFIELD,
Double Refined Cast Steel—Square, flat & octagon.
Best warranted Cast Steel—Square, flat & octagon.
Best Double and Single Shear Steel—Warranted.
Machinery Steel—Round.
Best and 2d gy. Sheet Steel—for Saws and other purposes.
German Steel—flat and sq., "W. I. & S." "Eagle" and "Goat" Stumps.
Genuine "Sykes," L. Blister Steel.
Best English Blister Steel, etc., etc., etc.
All of which are offered for sale on the most favorable terms, by WM. JESSOP & SONS,
91 John Street, New York.

Also by their Agents—
Curtis & Hand, 47 Commerce St., Philadelphia.
Alex'r Fullerton & Co., 119 Milk St., Boston.
Stickney & Beatty, South Charles St., Baltimore.
May 6, 1848.

NEW PATENT CAR WHEELS.

THE SUBSCRIBERS ARE NOW MANUFACTURING Metallic Plate Wheels of their invention, which are pronounced by those that have used them, a superior article, and the demand for them has met the most sanguine expectations of the inventors. Being made of a superior quality of Charcoal Iron, they are warranted equal to any manufacture.

We would refer Railroad Companies and others to the following roads that have them in use. Hartford and New Haven, Connecticut River Railroad, Housatonic, Harlem, Farmington, and Stonington.
SIZER & CO.,
January 29, 1848. if Springfield, Mass.

RAILROAD IRON AND LOCOMOTIVE

Tyres imported to order and constantly on hand by A. & G. RALSTON
Mar. 20th 4 South Front St., Philadelphia, Pa.

TO MACHINISTS & MANUFACTURERS.

The Subscribers have taken the READING CAR AXLE MANUFACTORY—and are prepared to execute orders for Axles of every description, and Wrought Iron Shafts for Steamboats, Mills, etc., made from superior material, at short notice. Address Reading, Pa.

ANDREW TAYLOR & CO.
August 5, 1848—3m*

RAILROAD IRON—SHEET IRON—BRASIER'S RODS—HOOPS—SCROLL—BANK'S BEST—& OTHER GOOD MAKES OF ENGLISH IRON.

100 Tons Railroad Iron—Staffordshire make—56 pounds per yard—shipped from Liverpool 20th July, expected to land on wharf from 10th to 20th September.

Also have Invoices of Sheet Iron, Brasier's Rods, Hoops, Scroll, and Band Iron, Banks best, and other good makes of English Rolled Iron, to arrive, suitable for Railroad Axles, etc., etc., equal in quality to American Rolled Iron. I have agency of several best makers in England and Wales, and can import for Railroad Companies, and others, on best terms, and at much less prices than they can be supplied from American Mills.

DAVID W. WETMORE,
218 Water street.
New York, Sept. 9, 1848.

JAMES LAURIE, Civil Engineer

No. 23 RAILROAD EXCHANGE, BOSTON, MASS.

Railroad Routes Explored and Surveyed. Estimates, Plans and Specifications furnished for Dams, Bridges, Wharves, and all Engineering Structures.

October 14, 1848.

6m*

MASONS AND STONECUTTERS WANTED—AT THE U. S. NAVY YARD, NEAR PENNSACOLA.—Twenty good Stonecutters can find immediate employment at dressing granite by the superficial foot. The beds and builds of the stone will alone be dressed—the face being left rough. For this work the high price of 25 cents per superficial foot will be allowed on the stone now in the yard, and the tools sharpened.

Those who are Masons as well as Stonecutters, will be preferred; and, more especially, those who are disposed to work, when necessary, in Diving Bells. The works in progress are very extensive, and will, probably, afford constant employment for some years.

To good workmen, of the above description, when employed by the day, the wages will be \$2.50, on the ten hour system; to which, an addition of the rate of one dollar per day will be made for such time as they may be employed in the Diving Bells. Or at the rate of \$3.50 per day.

The Diving Bell, and Machinery, are constructed on the most approved plans, and will be abundantly supplied with air and light, and the water kept low in the Bells, so that no inconvenience will be felt by the workmen, the depth being only from 25 to 30 feet.

Two good MACHINISTS can also find employment in the Navy Yard. Apply in person to

JAMES HERRON,

Civil Engineer, Navy Yard.

Jan. 1.

10t

RAILROAD IRON.

THE TRENTON IRON COMPANY ARE now turning out one thousand tons of rails per month, at their works at Trenton, N. J. They are prepared to enter into contract to furnish rails of any pattern, and of the very best quality, made exclusively from the famous Andover iron. The position of the works, on the Delaware river, the Delaware and Raritan canal, and the Camden and Amboy railroad, enables them to ship rails at all seasons of the year. Apply to

COOPER & HEWITT, Agents,
17 Burling Slip, New York.

October 30th, 1848.

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tilters etc., by **JOHN A. ROEBLING, Civil Engineer,** Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition.

NORWICH CAR FACTORY, NORWICH, CONNECTICUT

AT the head of navigation on the River Thames, and on the line of the *Norwich and Worcester Railroad*, established for the manufacture of

RAILROAD CARS,

OF EVERY DESCRIPTION, VIZ: PASSENGER, FREIGHT AND HAND CARS,

ALSO, VARIOUS KINDS OF

ENGINE TENDERS AND SNOW PLOUGHS.**TRUCKS, WHEELS & AXLES**

Furnished and fitted at short notice.

Orders executed with promptness and despatch.

Any communication addressed to

JAMES D. MOWRY,

General Agent,

Norwich, Conn.,

attention.

**RIDER'S PATENT IRON BRIDGE.**

The Rider Iron Bridge having now been fully tested on the Harlem Railroad, by constant use for about eighteen months, and found to answer the full expectations of its most sanguine friends, is now offered to the public with the utmost confidence as to its great utility over any other Bridge now known.

The plan of this Bridge is to use the iron so as to obtain its greatest longitudinal strength, and at the same time is so arranged as to secure the combined principles of the Arch, Suspension and Triangle, all under such controlling power as causes each to act in the most perfect and secure manner, and at the same time impart its greatest strength to the whole work.

The Rider Iron Bridge Company are prepared to furnish large quantities of Iron Bridging for Rail Road or other purposes, made under the above Patent, at short notice, and at prices far more economical than the best wood structure, and on certain conditions, the first cost may be made the same as wood.

Models, and pamphlets giving full descriptions of the Rider Bridge, with certificates based on actual trial from undoubted sources, will be found at the office of the Company, 74 BROADWAY, up stairs, or of W. RIDER & BROTHERS, 58 Liberty Street, where terms of contract will be made known, and where orders are solicited.

November 25, 1848.

M. M. WHITE,

Agent for the Company.

LAP—WELDED WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,

FROM 1 1/2 TO 8 INCHES DIAMETER.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

28 Platt street, New York.

ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.



No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

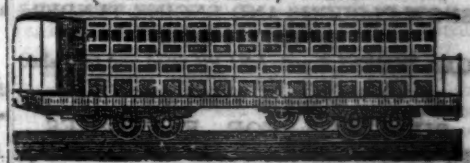
RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
Philadelphia, Pa.

CAR MANUFACTORY, CINCINNATI, OHIO.

KECK & DAVENPORT WOULD RESPECTFULLY call the attention of Railroad Companies in the West and South to their establishment at Cincinnati. Their facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. They are prepared to execute to order, on short notice, Eight-Wheeled Passenger Cars of the most superior description, Open and Covered Freight Cars, Four or Eight-Wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally. Cincinnati, Ohio, October 2, 1848.

RAILROAD IRON.

THE MOUNT SAVAGE IRON WORKS, Allegheny County, Maryland, having recently passed into the hands of new proprietors, are now prepared, with increased facilities, to execute orders for any of the various patterns of Railroad Iron.—Communications addressed to either of the subscribers will have prompt attention.

J. F. WISLOW, President

Mount Savage Iron Co., Troy, N. Y.

ERASTUS CORNING, Albany.

WARREN DELANO, Jr., N. Y.

JOHN M. FORBES, Boston.

ENOCH PRATT, Baltimore, Md.

November 6, 1848.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gear-ing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,

President of the Newcastle Manuf. Co.

TO RAILROAD COMPANIES AND MANUFACTURERS of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,
No. 45 N. E. cor. 12th and Market sts., Philad., Pa.

JAMES HERRON, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.

PATENTEE OF THE
HERRON RAILWAY TRACK.
MODELS of this Track, on the most improved plans, may be seen at the Engineer's Office of the New York and Erie Railroad.

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF
RAILROAD CARS,

SUCH AS
PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —
SNOW PLOUGHS AND ENGINE TENDERS
OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

The above may be had at order at our Car Factory,
REUEL DEAN,
ELIJAH PACKARD, } SPRINGFIELD, MASS.
ISAAC MILLS, } 1y48

TO CONTRACTORS.

OFFICE NASHVILLE & CHATTANOOGA R.R. Co.
Nashville, 9th November, 1848.

PROPOSALS WILL BE RECEIVED AT this office on 20th December next, for the Graduation and Masonry of forty miles of road, viz: twenty miles next to Nashville, ten miles crossing the Barran fork of Duck river in Bedford county, Tennessee, and ten miles on the northwest side of Tennessee river, in Jackson county, Alabama.

Profiles and plans may be seen at this office after 12th December. By order of the board.

C. F. M. GARNETT,
Chief Engineer.

N. B. Twenty-five miles of road (including the Tunnel,) and six miles heavy mountain work are under contract. Seven Hundred Laborers are wanted by the Contractors. 1*48

NOTICE.

RAILROAD LINE BETWEEN ALBANY AND BUFFALO, N. Y.

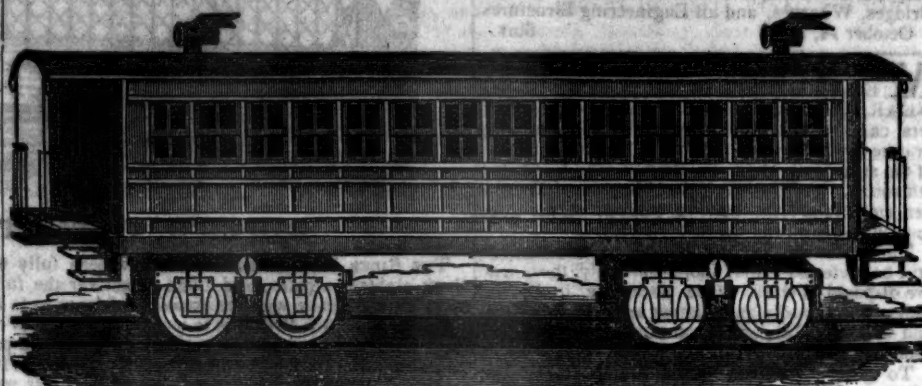
1848.—SCHEDULE FOR RUNNING.—1848.

Going west.	1st train.	2d train.	3d train.
Leaves Albany	7 1/2 A.M.	2 P.M.	7 P.M.
Pass Utica	1 P.M.	7 1/2 P.M.	1 1/2 A.M.
Pass Syracuse	4 1/2 P.M.	11 P.M.	5 A.M.
Pass Auburn	6 1/2 P.M.	1 A.M.	7 A.M.
Pass Rochester	12 M.N.	7 A.M.	1 P.M.
Arrives at Buffalo	5 1/2 A.M.	12 M.	6 P.M.
Going east.	1st train.	2d train.	3d train.
Leaves Buffalo	7 1/2 A.M.	2 P.M.	7 P.M.
Pass Rochester	12 M.	7 P.M.	12 M.N.
Pass Auburn	6 1/2 P.M.	1 A.M.	6 A.M.
Pass Syracuse	8 1/2 P.M.	3 A.M.	8 A.M.
Pass Utica	12 M.N.	7 A.M.	1 1/2 A.M.
Arrives at Albany	5 A.M.	12 M.	4 1/2 P.M.

Adopted February 18, 1848, in convention at Albany.
(Copy.) T. Y. HOWE, Jr.,
Secretary of the Convention.

DAVENPORT & BRIDGES'

CAR WORKS, CAMBRIDGEPORT, MASS.



Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes. 10f

THE SUBSCRIBERS ARE PREPARED TO execute orders at their Phoenix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.

ROBERT NICHOLS, Agent,
No. 79 Water St., New York.

RAILROAD IRON, PIG IRON, ETC.

600 Tons of T Rail 60 lbs. per yard.

25 Tons of 2 1/2 by 1/2 Flat Bars.

25 Tons of 2 1/2 by 9-16 Flat Bars.

100 Tons No. 1 Gartshrorie.

100 Tons Welsh Forge Pigs.

For Sale by A. & G. RALSTON & CO.
No. 4 So. Front St., Philadelphia

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark-Arrester recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney, of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits.

R. L. Stevens, President Camden and Ambov Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. McKee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city, will be promptly executed.

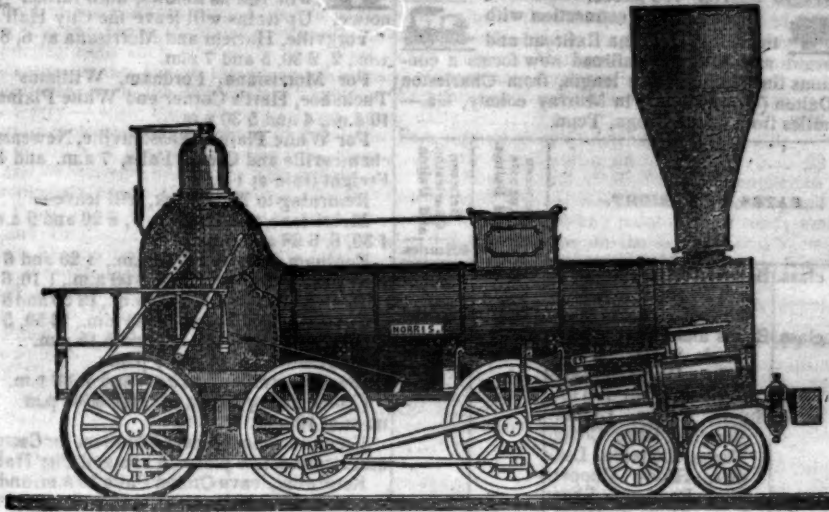
B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

The letters in the figures refer to the article given in the Journal of June, 1844.

ja15

NORRIS' LOCOMOTIVE WORKS. BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA.



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality. Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS' BROTHERS.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, Paterson, N. J., or 60 Wall street, N. York.

T. & C. WASON, Manufacturers of every style of Freight and Baggage Cars.—Forty rods east of the depot, Springfield, Mass.

Running parts in sets, complete, Wheels, Axles, or any part of cars furnished and fitted up at short notice and in the best manner.

N.B. Particular attention paid to the manufacture of the most improved Freight Cars. We refer to the New Haven, Hartford and Springfield; Connecticut River; Harlem; Housatonic, and Western, Mass., Railroads, where our cars are now in constant use.

Dec. 25, 1847.—1y.

RAILROAD IRON.

3000 TONS, ABOUT 60 LBS. PR lineal yard—deliverable early in the Spring, and of undoubted quality, can be contracted for at a low rate. For sale by

DAVIS, BROOKS & CO.,

68 Broad street.

New York, Sept. 16, 1848,

Also on hand—1000 Tons best quality Rails.

CHILLED RAILROAD WHEELS.—THE undersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of Spokes or Disks, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,

Willow St. below 13th,

Nov. 10, 1847. [if.] Philadelphia, Penna.



THE SUBSCRIBER has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc.

ANDREW MENEELY.

West Troy, May 12, 1847.

1y+21

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent

Spikes are kept for sale, at Factory Prices, by & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Jarviers, Baltimore; Degrand & Smith, Boston.

•• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS.

Warehouse S. E. corner 3d and Walnut Sts., Philadelphia.

11

CHILLED RAILROAD WHEELS.—THE undersigned, the Original Inventor of the Plate Wheel with solid hub, is prepared to execute all orders for the same, promptly and faithfully, and solicits a share of the patronage for these kind of wheels which are now so much preferred, and which he originally produced after a large expenditure of time and money.

A. TIERS.

Point Pleasant Foundry,

He also offers to furnish Rolling Mill Castings, and other Mill Gearing, with promptness, having, he believes, the largest stock of such patterns to be found in the country.

A. T.

Kensington, Philadelphia Co.,

March 12, 1848.

111

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

FASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T. L. and other fixtures to suit, fitting together with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by

MORRIS, TASKER & MORRIS.

Yardhouse S. E. Corner of Third & Walnut Streets, PHILADELPHIA.

LAWRENCE'S ROSENDALE HYDRAULIC CEMENT. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floods and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight paper-barrels, by **JOHN W. LAWRENCE,** 112 Front street, New York.

Orders for the above will be received and promptly attended to at this office. 32 1/2

LOCOMOTIVES FOR SALE.

FOR SALE—Three Locomotive Engines and Tenders, in good running order. Apply to

JOHN WILKINSON, President of the Syracuse & Utica R. R. Syracuse, New York.

December 16, 1818.

4150

BOSTON AND PROVIDENCE RAILROAD. On and after Monday, October 2d, the

Trains will run as follows:

Steamboat Train—Leaves Boston at 5 p.m.—Leaves Providence, on the arrival of the train from Stonington.

Accommodation Trains—Leave Boston at 8 a.m. and 3 p.m. Leave Providence at 8 a.m. and 3 p.m.

Dedham Trains—Leave Boston at 9 a.m., 12 m., 3, 6, and 10 p.m. Leave Dedham at 7 1/4 a.m., 11 1/4, 4, and 9 p.m.

Stoughton Trains—Leave Boston at 11 1/4 a.m. and 4 p.m. Leave Stoughton at 8 1/4 a.m. and 2 1/4 p.m.

Freight Trains—Leave Boston at 11 a.m. and 6 p.m. Leave Providence at 4 a.m. and 7 40 a.m.

On and after Wednesday, Nov. 1, the DEDHAM TRAIN will run as follows: Leave Boston at 9 a.m., 12 m., 3, 5 1/2 and 10 1/2 p.m. Leave Dedham at 10 1/4 a.m., 11 1/4, 4, and 9 p.m.

WM. RAYMOND LEE, Sup't.

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1818.

WINTER ARRANGEMENT.

December 4th.—Fare \$4.

Leave Philadelphia 8 a.m. and 4 p.m.

Leave Baltimore 9 a.m. and 8 p.m.

Sunday—Philadelphia only at 4 p.m.

Baltimore only at 8 p.m.

Trains stop at way stations. A second class car run with morning line only.

CHARLESTON, S. C.

Through tickets Philadelphia to Charleston, \$20.

Connecting lines to Charleston leave Philadelphia at 4 p.m. daily—leave Baltimore at 11 1/4 p.m. daily.

PITTSBURG AND WHEELING.

Through ticket, Philadelphia to Pittsburg, \$12.

Wheeling, 13.

All through tickets only sold at office, Philad.

WILMINGTON ACCOMMODATION.

Leaves Philadelphia at 11 and 4 p.m.

Leaves Wilmington at 8 a.m. and 4 p.m.

N.B.—Extra baggage charged for.

T. R. TRIMBLE, Gen. Sup't.

GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.

	Between Augusta and Dalton, 271 miles.	Between Charleston and Dalton, 408 miles.
1st class. Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	\$0 18	\$0 28
2d class. Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class. Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 86
4th class. Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 40	0 65
Cotton, per 100 lbs.....	0 45	0 70
Molasses, per hoghead.....	8 50	13 50
" " barrel.....	2 50	4 25
Salt per bushel.....	0 18	
Salt per Liverpool sack.....	0 65	
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows....	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

Sup't. of Transportation.

Augusta, Ga., July 15, 1847.

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warren, Huntville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT, Chief Engineer.

Atlanta, Georgia, April 16th, 1846.

CENTRAL RAILROAD-FROM SAVANNAH TO MACON. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight.

Rates of Passage, \$9 00. Freight—On weight goods generally... 50 cts. per hundred.

On measurement goods..... 13 cts. per cubic ft.

On brls. wet (except molasses and oil)..... \$1 50 per barrel.

On brls. dry (except lime).... 80 cts. per barrel.

On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred

On hds. and pipes of liquor, not over 120 gallons..... \$5 00 per hhd.

On molasses and oil..... \$6 00 per hhd.

Goods addressed to F. WINN, Agent, forwarded free of commission.

THOMAS PURSE, Gen'l. Sup't. Transportation.

710

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after

Tuesday, June 1st, 1847, the cars will run as follows, until further notice.

Up trains will leave the City Hall for—Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m. Freight train at 1 p.m.

Returning to New York, will leave—Morrisana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m. and 4 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m. and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9 1/2 p.m.

ON SUNDAYS, the trains will run as follows: Leave City Hall for Croton Falls, 7 a.m., 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will precede each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers \$1, to Mechanicsville 87c., to Newcastle 75c., to Pleasantville 62c. to White Plains 50c.

NORWICH AND WORCESTER RAILROAD. Winter Arrangement.—1848.

Accommodation Trains daily, (Sundays excepted).

Leave Norwich, at 6 a.m., 12 m. and 2 1/2 p.m.

Leave Worcester, at 6 1/2 and 10 a.m., and 4 1/2 p.m.

connecting with the trains of the Boston and Worcester and Providence and Worcester railroads.

New York & Boston Line. Railroad & Steamers. Leave New York and Boston, daily, Sundays excepted, at 5 p.m.—At New York from pier No. 1 N. River.—At Boston from corner Lincoln and Beach streets, opposite United States Hotel. The steamboat train stops only at Framingham, Worcester, Danielsonville and Norwich.

Freight Trains leave Norwich and Worcester daily, Sundays excepted—From Worcester at 6 1/2 a.m., from Norwich at 7 a.m.

Fares are Less when paid for Tickets than when paid in the Cars.

32 1/2 S. H. P. LEE, Jr., Sup't.

BOSTON AND MAINE RAILROAD.

Winter Arrangement. Commencing Nov. 13, 1848.

Trains leave Boston as follows, viz: For Portland at 7 A.M. and 2 1/2 P.M.

Great Falls at 7 a.m., 2 1/2 and 3 1/2 p.m.

Haverhill at 7 and 11 1/2 a.m., 2 1/2, 3 1/2 and 5 p.m.

Lawrence, at 7, 9, 11 1/2 a.m., 2 1/2, 3 1/2, 5, 6 p.m.

Reading 7, 9 & 11 1/2 a.m., 2 1/2, 3 1/2, 5, 6, 7 1/2 & 10 p.m.

Trains leave for Boston as follows, viz: From Portland at 7 1/2 a.m., and 3 p.m.

Great Falls at 6 1/2 and 9 1/2 a.m., and 4 1/2 p.m.

Haverhill at 7, 9 1/2 and 11 a.m., 3 and 6 1/2 p.m.

Lawrence at 6 1/2, 7 1/2, 9 1/2, 11 1/2 a.m., 12 1/2, 3 1/2, 6 1/2, 9 p.m.

Reading at 7, 7 1/2, 9 1/2, 11 1/2 a.m., 1 1/2, 3 1/2, 7 1/2, 9 p.m.

MEDFORD BRANCH TRAINS. From Medford at 6 1/2, 8, 10 1/2 a.m., 2, 4, 6, 9 p.m.

From Boston at 7 1/2, 9 1/2 a.m., 12 1/2, 2 1/2, 5 1/2, 6 1/2, 10 p.m.

The Depot in Boston is on Haymarket Square.

CHAS. MINOT, Super't. Boston, Nov. 7, 1818.

BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7 1/2 and

Cumerciand at 8 o'clock, passing Elliott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5 1/2 P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5 1/2 P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. \$13 1/2

BALTIMORE AND SUSQUEHANNA

Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger

trains run daily, except Sunday, as follows:
Leaves Baltimore at.....9 a.m. and 3 1/2 p.m.
Arrives at.....9 a.m. and 6 1/2 p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12 1/2 p.m. and 8 p.m.
Leaves York for Columbia at.....1 1/2 p.m. and 8 a.m.
Leaves Columbia for York at.....8 a.m. and 2 p.m.

FARE.

Fare to York.....\$1 50
" Wrightsville.....2 00
" Columbia.....2 12 1/2

Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....\$9
Or via Lancaster by railroad.....10
Through tickets to Harrisburg or Gettysburg.....3
In connection with the afternoon train at 3 1/2 o'clock, a horse car is run to Green Spring and Owings' Mill, arriving at the Mills at.....5 1/2 p.m.
Returning, leaves Owings' Mills at.....7 a.m.

D. C. H. BORDLEY, Sup't.
Ticket Office, 63 North st.

NEW YORK & PHILADELPHIA.

NEW JERSEY RAILROAD & TRANSPORTATION CO.

8 O'CLOCK, A. M.

Accommodation Line from New York to Philadelphia, via Jersey City, New Brunswick, and Camden.

Fare for 1st class cars, \$3; for 2d class, \$2 50; children under 12 years, half price.

Leaving every morning, (Sundays excepted) at 6 o'clock, from foot of Courtlandt street, and passing through Newark, Elizabethtown, Rahway, New Brunswick, Kingston, Princeton, Trenton, Bordentown, Burlington and Camden, and arriving at Philadelphia at 11 1/2 A. M.

Leave New York 6 o'clock A. M.; Newark, 6h. 30m.; Elizabethtown 6h. 40m.; Rahway, 7 A. M.

DAILY EXCURSION TO PHILADELPHIA.

Excursion Tickets will be furnished, entitling the passengers to return by the 4 1/2 o'clock P. M. Mail Line the same day, or next morning by the 6 o'clock A. M. Mail Line, for FIVE DOLLARS.

RAILROAD IRON—2500 TONS HEAVY

Rail, now landing, and expected shortly to arrive, for sale on most favorable terms by

DAVIS BROOKS & CO.

July 19th, 1846 63 Broad street, New York.

SOUTH CAROLINA RAILROAD.

A Passenger Train runs daily from Charleston on the arrival of the boats from

Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery

daily.....\$26 50

Fare through from Charleston to Huntsville,

Decatur and Tuscumbia.....22 00

The South Carolina Railroad Co. engage to receive merchandise consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

JOHN KING, Jr., Agent.

CENTRAL AND MACON AND WESTERN

Railroads, Ga.—These Roads with the Western and Atlantic Railroad

of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macón—Central Railroad.....100 Miles.

Macon to Atlanta—Macon and Western.....101

Atlanta to Oothcaloga—Western and Atlantic.....80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton

Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings.....\$0 50

Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones.....0 50

On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot.....0 20

Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot.....0 20 pr. 100 lbs. 35

Crockery, per cubic foot.....0 15 " " 35

Molasses and Oil, per bhd., (smaller casks in proportion). 9 00 12 50

Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each.....1 25 1 50

Ploughs, (small,) and Wheelbarrows.....0 80 1 05

Salt, per Liverpool Sack.....0 70 0 95

Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.

Goods consigned to the subscriber will be forwarded free of Commissions.

Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R. Savannah, At 7. 15th. 1846. 1v34

PHILADELPHIA AND READING RAILROAD.

—Passenger Train Arrangement for 1848.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A. M.

Fares. Miles. No. 1. No. 2.

Between Phila. and Pottsville, 92 \$3 50 and \$3 00

" Reading, 58 2 25 and 1 90

" Pottsville, 34 1 40 and 1 20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets.

NEW YORK ANDERIE RAILROAD LINE.

SUMMER ARRANGEMENT. For passengers, twice each way daily, (except Sunday,) leave New

York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 40, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, \$1 50; way-fare in proportion.

For Milk—Leave Otisville at 5 1/2 o'clock, morning and evening.

For Freight—The barges "Samuel Marsh" and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10 1/2 o'clock, A. M.; Middletown at 11 1/2, A. M.; Goshen at 12 1/2, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

H. C. SEYMOUR, Sup't.

LITTLE MIAMI RAILROAD COMPANY

Fall and Winter Arrangement, 1847. On and after Monday, September 20th,

until further notice, a Passenger train will run as follows:

Leave Cincinnati daily at 9 A. M., for Millford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freepport, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield. Returning, will leave Springfield at 4 1/2 a.m. Upward train arrives at Cincinnati at 10 1/2 a.m.

Freight trains will run each way daily.

Messrs. Neil, Moore & Co. are running the following stage lines in connection with the road:

A daily line from Xenia to Columbus and Wheeling, carrying the great Eastern mail.

Daily lines from Springfield to Columbus, Zanesville and Wheeling. Also to Urbana and Bellefontaine.

A line of Hacks runs daily in connection with the train between Deerfield and Lebanon.

Passengers leaving for New York and Boston, arrive at Sandusky city via Urbana, Bellefontaine & the Mad River and Lake Erie railroad, in 27 hours, including several hours' sleep at Bellefontaine. To the same point via Columbus, Delaware, Mansfield and the Mansfield and Sandusky city railroad, in 33 hours. Distance from Cincinnati to Springfield by railroad.....84 miles.

From Springfield to Bellefontaine by stage, over a good Summer road.....33 "

From Bellefontaine to Sandusky city by railroad.....102 "

Fare—From Cincinnati to Lebanon.....\$1 00

" " " Xenia.....1 50

" " " Springfield.....2 00

" " " Columbus.....4 00

" " " Sandusky city 7 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

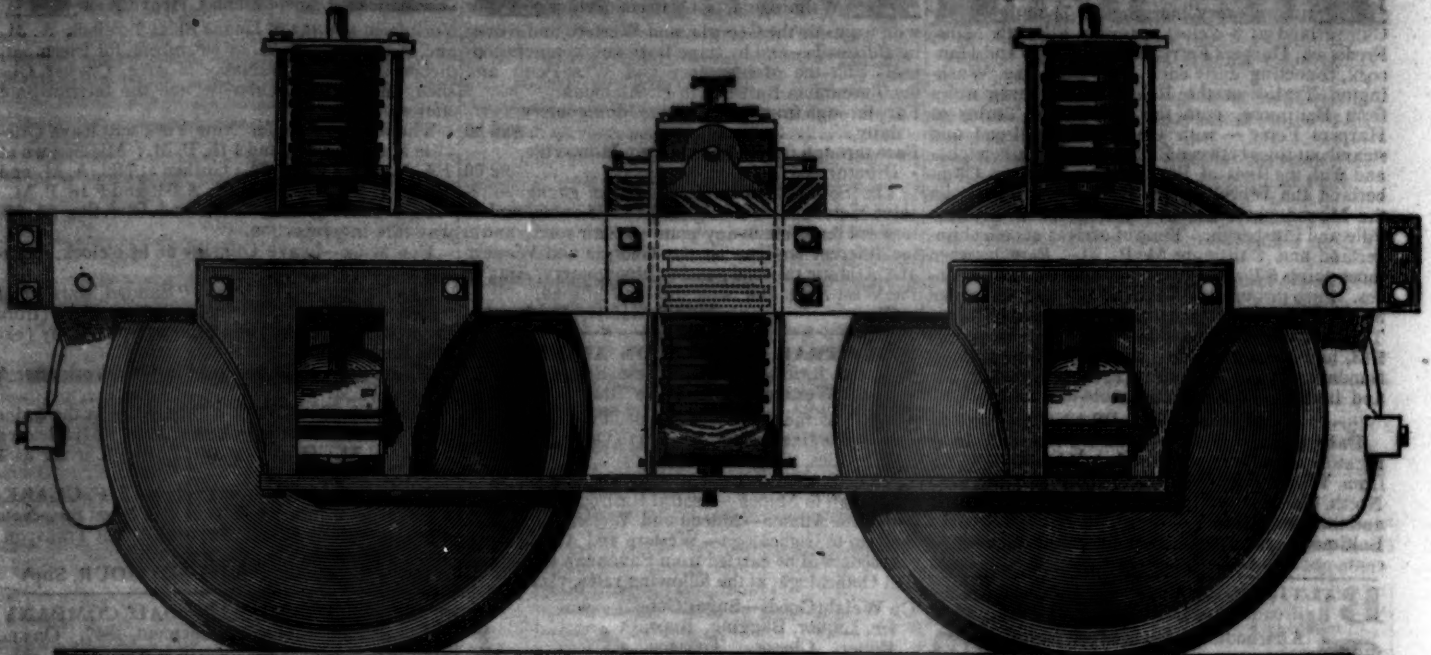
Further information and through tickets for the Stage lines, may be procured at P. Campbell, Age 1 on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every \$500 in value over that amount.

W. H. CLEMENT, Agt.

FOWLER M. RAY'S

METALLIC INDIA RUBBER CAR SPRINGS.



THE NEW ENGLAND CAR COMPANY have introduced these Springs, and they are now in operation on every Railroad terminating in Boston, and several others in New England and the Middle States. Their qualities are well understood, or may be readily ascertained by every person interested to know them. They require no recommendation from the Company. The only known compound of India Rubber good for anything for this purpose is the Vulcanized India Rubber, invented by Charles Goodyear of New Haven and the application of it in this form in which it is used, were invented by F. M. Ray, of New York. The right to manufacture and sell the substance itself for the purpose of Railroad Carriage Springs, as well as the form of application of it are held exclusively by the New England Car Company. No other company, or individual, has any right to sell or use it for such purpose, or has attempted to do so in this country.

The New England Car Company guarantee the right to use the article they sell for Railroad Carriage Springs only against all adverse rights, whether under patents or otherwise; and all persons and corporations are cautioned against a similar use of this article, when purchased of any other parties.

The Springs they sell are all manufactured in a uniform manner, and under the immediate inspection of their own Agent, and have been proved and known to answer the purpose. None have been manufactured in this country, or imported from abroad, besides their own, which would at all answer the purpose; and if any such should be produced it cannot be used for Car Springs, while Goodyear's patent is, and the rights of the New England Car Company under the same remain in force.

The New England Car Company are now prepared to answer orders for a material that may be called for, on reasonable notice and uniform and equitable terms. They merit the most careful examination and the severest scrutiny into the merits of their Springs, wherever they have applied them. And if after such examination your Company should judge it to their interest to do so, then the New England Car Company would respectfully invite the patronage, which they think they deserve, and are confident of receiving at your hands.

EDWARD CRANE, Agent,

Office 99 State street,

Orders may also be left with **Wm. RIDER & BROTHERS, No. 53 Liberty street, New York,** or with

F. M. RAY, Agent,

100 Broadway, N. Y.

The following article, from the pen of Mr. Hale, the president of the Boston and Worcester Railroad, expresses his opinion of this important improvement, as published in the Boston Daily Advertiser of June 7, 1848. He says:

"Of the numerous uses to which the wonderful elasticity and durability of India Rubber renders this material

especially well adapted, one in which it has been more successfully than in any other applied to railroad cars. We have adopted it in preference to some months past, its application to this use, on one of the passenger cars on the New England Railroad of the Boston and Worcester Railroad. It is there used not only for the springs on which the car rests, but for the springs attached to the draw bar at each end of the car to prevent any sudden or violent advance or retreat of the car in the motion of the car. For both these purposes it appears to be admirably adapted, and we do not learn that during the period in which it has been used, any defect in it has been discovered. It renders the movement of the car extremely easy, and protects it more effectually, we think, than any other spring which we have ever seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is simple in its form and application, extremely light, and it is able to set out or repair during the period of some months, in which we have seen the springs in operation, there is no apparent wear or diminution of their efficacy."

The above statement of Mr. Hale agrees with my own observation in all particulars.

WM. PARKER, Supt. B. & W. R. R.

June 8, 1848.

I fully concur in the foregoing statement, from practical observation of its use for the last 5 months, on the Boston and Worcester Railroad corporation cars.

D. N. PICKERING, Jr.,

Supt. Car Building, B. & W. R. R.

Boston, June 10, 1848.

The New England Car Company have introduced their Vulcanized India Rubber Car Springs on the road with which we are exclusively concerned, and we fully concur with Mr. Hale in the above opinion of their character and properties.

DAVENPORT & BRIDGES, Car Builders,

BRADLEY & RICE, Car Builders,

Boston, June, 1848.

PIG AND BLOOM IRON.—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniata Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,

Vine St. Wharf, Philadelphia.

BACK VOLUMES OF THE RAILROAD JOURNAL for sale at the office, No. 98 Nassau street.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 14 to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,

12 Platt street, New York.

JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 281

AMERICAN RAILROAD JOURNAL.

OFFICE AT NO. 98 NASSAU STREET,

(Opposite the Herald Buildings.)

NEW YORK.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, in advance.

RATES OF ADVERTISING:

One page per annum.....	\$125 00
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One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
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LETTERS and COMMUNICATIONS for this Journal may be directed to the Editor,

D. K. MINOR.